ON THE

DISEASES OF THE UTERUS

AND ITS

APPENDAGES.

THE PLATES.

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A

PRACTICAL TREATISE

ON THE

DISEASES OF THE UTERUS

AND ITS

APPENDAGES.

TRANSLATED FROM THE FRENCH OF

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SAGE-FEMME SURVEILLANTE EN CHEF DE LA MAISON DE SANTÉ, ETC.

AND

A. DUGÈS,

PROFESSEUR A LA FACULTÉ DE MÉDECINE DE MONTPELLIER, ETC.

WITH COPIOUS NOTES,

BY

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THE PLATES.

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EXPLANATION OF THE PLATES.

PLATE I.

Fig. 1. *The uterus previous to impregnation. The organ viewed at its posterior part.*

A, A. Body of the uterus.
B. Os uteri.
C. Median line or longitudinal fibrous layer of the uterus.
O, O. Posterior, or *utero-sacral*, ligaments, formed by a continuation of the fibres of the body and of the cervix.
D, D. Alæ of the uterus; continuation of the posterior oblique fibrous layers, forming the *ligaments of the ovaria.*
E, E. Ovaria.
F, F. Fallopian tubes.
G, G. Pavilion of the Fallopian tube.
H, H. Fimbriated borders of the pavilion.
I, I. Broad ligaments or folds of the peritonæum.
J, J. Ovarian ligament.
K, K. Anterior portion of the vagina presenting its internal surface.

Fig. 2. *The uterus viewed at its anterior surface.*

A. Median line or anterior longitudinal fibrous layer.
B. Anterior labium of the os uteri, longer than the posterior; it prevents the utero-vaginal orifice from being seen.
C, C. Origin of the round, or super-pubic, ligaments.
O, O. Super-pubic, or round, ligaments.
D, D. Fallopian tubes.
E. E. Fimbriated borders of the Fallopian tube.
F, F. Ovaria viewed through the tissue of the broad ligaments.
G, G. Broad ligaments or folds of the peritonæum.

Fig. 3. *The uterus, viewed in profile.*

A. Posterior paries more prominent and more rounded than the opposite.

B. Posterior labium of the os uteri more elevated than the anterior, forming *le bec de flûte.*

C. Vesico-uterine fold of the peritonæum.

D. Recto-vaginal fold of the same membrane

Fig. 4. *View of the internal surface of the uterus during the period of the catamenia; the organ opened at one of its edges.*

A. Body of the uterus. The median line is observed to be depressed, and drops of blood to exude.

B. Internal orifice of the cervix uteri.

C. External orifice. Between these two orifices are the cavity of the cervix and the numerous plicæ affording the means of a considerable enlargement of this part of the uterus, during pregnancy and in some other circumtances. (*See* Pl. II, fig. 6.)

PLATE II.

THE OS UTERI IN ITS NATURAL STATE.

Fig. 1. *Before puberty.*

Fig. 2. *At puberty.*

Fig. 3. *After marriage.*

Fig. 4. *During the flow of the catamenia and previous to impregnation.*

Fig. 5. *After natural labour. Slight cicatrices at the angles of the borders.*

Fig. 6. *Uterus after death in the first weeks of pregnancy.*

In this sixth figure the organ is opened at one of its lateral borders and presents the internal surface of its two parietes of a deep red colour, and soft tissue. Each of them, at the body, is marked with a longitudinal furrow which occupies the middle and corresponds to a prominent line in each paries of the cervix.

The cervix uteri, of a pale livid colour, presents, in its cavity, which is almost as capacious as that of the body, numerous folds,—some simple, others complex,—assuming different directions. In these folds are numerous mucous follicles. At their surface there are frequently globular concretions, sometimes transparent and containing fluid, sometimes calcareous matter. These are sometimes so numerous, and crowded together, as ultimately to efface all the folds of the cervix, and even entirely to obstruct its cavity.

In the natural state, however, after a recent pregnancy, these folds are gorged with a glairy, viscid humour, which exactly fills the cavity of the cervix, constituting a kind of plug, up to the last period of pregnancy, when this matter flows in abundance, lubricates the vagina and its orifices, preparing them for dilatation in labour.

A, A. Body of the uterus.
B, B. Internal orifice.
C, C. External orifice.

PLATE III.

Representing the disposition of the fibrous layers of the uterus at the full period of pregnancy, viewed at the anterior surface of the organ.

The organ is reduced to two-thirds of its ordinary volume.

A. Median line of the uterus, its upper extremity being inclined to the left,—its usual direction.

On comparing the disposition of the median fibrous layers of the uterus in the state of its greatest enlargement, with the same layers in the unimpregnated state of the organ (Pl. I), a considerable difference is observed. The longitudinal fibres have disappeared, or, rather, have changed their direction, by separating from below upward in the direction of the enlargement of the uterus; in the fifth or sixth month of pregnancy, these fibres are separated like leaves of the palm tree, or folds of an opened fan (*see* Pl. XXII), and, at the termination of pregnancy, this median layer presents only a net-work of fibres interlaced upon the whole length of this line.

B, B. The superior, inferior, and transverse layers of fibres are united with a portion of the same fibrous layers of the posterior surface, into a single fasciculus, to form the super-pubic ligaments. These ligaments, by the elongation which they have undergone at their base, are then situated at the two lower thirds of the body of the uterus.

It is upon the median line, on each side of the pubes, in front, and upon the inferior region of the sacrum, behind, that the layers of the exterior fibres of the uterus have their principal fixed point during the contraction of this organ.

C, C. The Fallopian tubes, the fibres of which arise upon the

median line of the fundus of the uterus, and extend transversely as far as the angles, to unite and form tubes which terminate loosely in a widened orifice with fimbriated borders, and are called their pavilions.

D, D. The ovaria brought nearly to the level of the surface of the body of the uterus by the effect of pregnancy.

E, E. The cervix uteri containing a portion of the distended amnion and the head of the fœtus. The cervix comprises the space between the two points where the two super-pubic ligaments leave the uterus. This inferior portion of the uterus, of a pale rose-colour, is remarkably contrasted with the rest of the organ which is of a bright red colour. The Fallopian tubes and the ligaments are rather less coloured.

F. Corpus luteum.

H. Section of the vagina

I. External orifice dilated and presenting a portion of the fœtal membranes.

Note. We have designedly omitted to represent the course of the different vessels of the body of this organ. This will be the subject of a separate work.

PLATE IV.

The uterus viewed after recent delivery, at its anterior surface, and still covered with the peritonæum. It is of a red-lilac colour throughout.

A. Median line turning in two opposite directions.

B, B. Origin of the Fallopian tubes.

E, E. Fallopian tubes.

C, C. Origin of the super-pubic ligaments.

O. Ovaria.

D, D. Layers of exterior concentric fibres, designated by J. Sue as *quadrigemini muscles*, and compared by Alphonso Leroy with knots in wood. A similar disposition is observed on the opposite paries.

This disposition of the fibrous layers of the uterus, so different from that in the unimpregnated condition, in the gravid state of the same organ, varies also in several other circumstances not neces-

sary to mention. We have however discovered that all these rugæ are formed by the peritonæum and the *utero sub-peritonæal* coat which cover the real fibrous layers of the uterus. These latter, in contracting, have preserved very nearly their original disposition; this we have ascertained from having been enabled entirely to detach the body of the uterus from the two coats which envelope it and adhere so closely to it, especially at its superior and median regions.

This new discovery of the real disposition of the fibrous layers of the uterus after delivery has been the subject of a 'mémoire' published in the 'Bulletins de la société medico-pratique, 1830.'

(See the two following figures.)

PLATE V.

View of the anterior surface of the uterus after recent delivery, and after having been detached from the peritonæum and utero sub-peritonæal coat.

I, I, I. Median layer of the uterus.
2. Right ovarium.
3. Right Fallopian tube.
4. Right super-pubic ligament.
5. Fibrous layers common to the super-pubic ligament, and to the Fallopian tube on the right side.
6. Fibrous layers common to the super-pubic ligament 7, and to the left Fallopian tube 8.
9, 9, 9. Portions of the muscular coat and of the peritonæum, which cover the anterior surface of the body of the uterus.

Note. By the separation of some portions of the fibrous layers of the uterus,—the effect of the entire enlargement of the organ,—we see the necessity of this muscular coat, which closely covers the fundus and the body, and keeps them in their respective positions. Without this protection, the ruptures of this organ would be much more frequent.

PLATE VI.

View of the posterior surface of the uterus, represented in the preceding plate, No. V. *The peritonæum is removed.*

It will be observed on this side of the uterus that the fibrous

layers which proceed to the ovaria arise from a common centre,—that is, from the median line and from the fundus of this organ.

1, 1, 1. Median line.
2, 2. Ovaria.
3, 3. Layers of fibres common to the Fallopian tubes and to the ovaria.
4, 4. Fibrous layers proper to the ovaria.
5, 5. Oblique ascending layers, common to the ovaria and to the super-pubic ligaments.
6, 6. Broad ligaments.
7, 7. Portions of the sub-peritonæal coat and a part of the peritonæum which covers the layers already described.

Note. We would observe that the alæ of the ovaria, as well as their ligaments, have disappeared during pregnancy, their substance being added to the posterior paries of the uterus. The organ, in enlarging, has appropriated this fibrous tissue, which appears to be reserved in the unimpregnated state, to contribute to the enlargement of the organ during pregnancy.

The ovaria, which, in the unimpregnated state, were three or four inches distant from the angles of the uterus, are, at the termination of labour, only a few lines from the body of that organ, and nearly at the middle of its lateral borders. By this disposition it is observed that the ovarium must be exposed to external shocks and compression, since they are protected, during advanced pregnancy, only by the very thin abdominal parietes. (See Pl. III.)

PLATE VII.

View of the uterus at its interior surface, after recent delivery. Internal posterior paries: the placenta had been attached to the opposite paries.

A, A. Internal orifice of the Fallopian tubes: *utero-tubular.*
B, B. Layers of the concentric fibres of the internal lateral regions, or expulsory muscles of *Ruysch.*

This writer has only observed this disposition on one side. Whether the opposite layer had been effaced, whether it had been covered and changed by the presence of the placenta, or whether this celebrated anatomist had never sufficiently examined the case,—he has only mentioned one layer of those fibres which we have always found

double, when the placenta was not attached to one of them; some portions of them are, however, always to be seen.

F, F. Internal median line; disposition of its fibres.

C, C, C. Internal orifice of the uterus.

D, D. External orifice forming on the vagina a slight corded hood at the surface of that canal.

E. Median line of the posterior paries of the cervix, which gives rise to the numerous folds observable at its surface.

Note. These folds can only be seen when the cervix remains in a state of collapse; they are so thin, and so closely glued upon each other, that they are generally only distinguished by moving the preparation in clear water. If the preparation be afterwards immersed in water strongly impregnated with sulphate of alum, the parietes of the cervix are observed to contract in every direction, its folds to change their direction, its orifices to contract, that of the os uteri to recede within the cervix and assume its mammelated form. This effect takes place immediately, when the solution is sufficiently powerful.

PLATE VIII.

PROLAPSUS OF THE VAGINA.

This prolapsus of the vagina, which was at first mistaken for that of the uterus and treated with the pessary, having recurred, its pyramidal form led to its being confounded with polypus, and a ligature was accordingly applied. The prolapsus recurred a second time: a second ligature was followed, like the first, by the separation of an enormous tumor. Scarcely had this been removed, when a third appeared, of the same size, and apparently of the same texture as the two former. These tumors, which presented themselves successively and spontaneously in less than a month, and the nature and seat of which had been misunderstood, were occasioned by the presence of an enormous mass of diffluent, encephaloïd tissue, formed between the rectum and the vagina. Being covered by the posterior paries of this latter canal, it formed a tumor as large as the fist beyond the os externum.

1, 1. Section of the pubes.

2, 2. Inverted portions of the abdominal parietes.

3, 3. Posterior paries of the vagina, of a bluish, livid red colour.

4, 4. Tube passed through the openings made by the two ligatures applied at a month's interval. (From the early part of January, 1830, to the 28th of that month. The third tumor appeared on the 12th of February.)

5. Os uteri.

6. Body of the uterus, nearly the whole of which was situated between two white fibrous tumors with smooth surfaces, to which the cervix appeared to be cemented. This organ was situated nearly upon a level with the umbilicus.

7. Anterior fibrous tumor.

8. Posterior tumor.

9. The rectum, pushed upward and much elongated, was dragged down with the uterus.

10. Left ovarium of a greenish yellow colour, hard, and rugous at its surface.

11. Right ovarium, transparent, membranous, and containing a serous, transparent fluid.

12. The right psoas muscle.

13. The small intestines removed, in order to show the parts described.

PLATE IX.

DISPLACEMENTS OF THE UTERUS.

By Prolapsus.

Fig. 1. *Semi-prolapsus after delivery.*

A. The vagina.

B. The os uteri.

Fig. 2. *Complete prolapsus after a fall.*

A, A. The inverted vagina.

B. The os uteri. The accident had recently occurred.

Fig. 3. *Bands and adhesions of the vagina.*

A. The os uteri concealed by unnatural bands.

B, B. Bands of the vagina.

Fig. 4.

A. Morbid elongations of the vagina upon the orifice of the os uteri.

B. Tumefaction of the os uteri.
C, C. Small, red, flabby, vascular tumors.

ANTEFLEXION OF THE UTERUS.

Fig. 5. *The uterus folded upon itself, presenting its fundus forward.*

A. Fundus of the uterus.
B. Anterior labium of the os uteri.
C. Internal surface of the vagina.
D, D. Ovaria situated upward and forward, instead of being backward and beneath the Fallopian tubes.
E, E. Fallopian tubes displaced, together with the fundus uteri.

Fig. 6. *Side view of the uterus in anteflexion.*

A. Fundus of the uterus.
B. Angle formed by the flexure of the uterus, its point corresponding with the utero-cervical orifice.
C. Anterior labium of the os uteri.
D. Vertical section of the body, and of the cervix, of the uterus.
E. Internal surface of the vagina.

Fig. 7. *Extroversion of the cervix uteri.*

A. Body of the uterus.
B. Internal border of the os uteri.
C, C. Internal surface of the cervix inverted and turned outwards.
D. Orifice of the cervix.

Fig. 8. *Front view of the extroverted cervix uteri.*

A, A. Border of the external orifice.
B, B. Median lines of the interior surface of the cervix.
C. Orifice.

PLATE X.

Fig. 1. *Complete prolapsus of the uterus, with inversion of the vagina and of the lower part of the bladder, taken from a living subject, sixty years of age, who became imbecile several months before.*

A. External, or utero-vaginal, orifice of the uterus.
B, B. Superior orifice of the vagina become inferior.
C, C. Mucous surface of the vagina.
D. Meatus urinarius.

E. A sound passed downward into the neck of the bladder, and an *imaginary* opening in the paries of the vagina, corresponding with the bladder, to show the inversion of the latter.

The fundus of the uterus was nearly at the upper angle of the imaginary opening.

The patient passed the urine by pressing the tumor; the urine flowed upward by the meatus urinarius, D, but a small quantity always remained in the bladder.

F, F. Ulcerations occasioned by the flow of urine upon this inverted portion of the vagina.

G. The clitoris.

Fig. 2. *Complete prolapsus of the uterus, with inversion of the vagina, in a chronic state.*

The subject of this displacement entered the Maison de Santé on the 27th May, 1832, for an affection of the stomach, which was treated for a long time as an organic disease of that viscus; she spoke only occasionally of the prolapsus uteri with which she had been affected more than thirty years.

The patient had but one child, which was born in her twenty-eighth year. She rose from her bed on the eighth day after delivery, to resume her usual occupation of a *groom*—her husband being in the habit of letting out horses and chariots. She almost immediately felt a large foreign body protrude from the vagina. The organ was replaced and supported by a large pessary, the patient keeping her bed for fifteen days. The pessary, becoming uneasy, was removed; it was afterwards resumed, and again discontinued. The prolapsus appeared to be a long time in becoming complete. It was not until the patient's fiftieth year, when the catamenia entirely ceased, that the uterus protruded completely beyond the os externum; from this period it remained externally, without occasioning any other inconvenience than draggings in the loins and in the inferior region of the sacrum. The mucous membrane of the vagina had assumed all the characters of the skin of the adjoining tissues; there remained scarcely any traces of the original rugæ, with which this membrane was furrowed before its inversion and exposure to the atmosphere. I easily returned the tumor; but the patient would not submit to another application of the pessary. The perinæum being lacerated as far as the anus, and the case consequently requiring an instrument of large dimen-

sions, I ceased to urge its repetition; more especially, as the patient was now accustomed to this state of things.

A. The clitoris.
B. Meatus urinarius.
C, C. Nymphæ.
D, D. Labia pudendi.
E, E. The mucous surface of the vagina, dry, and presenting the appearance of skin. This canal, completely inverted, contained the entire uterus, which was very small.
F. Small pediculated tumor, situated at a right angle to the orifice of the os uteri.
G. Epithelium of the os uteri excoriated, exposing the portion of the mucous membrane which covers this vaginal extremity of the cervix uteri.

PLATE XI.

Elongation of the cervix uteri.—Its flattened form.—Crural hernia of the uterus.—Ante and retroversio uteri.

Fig. 1. *Elongation of the cervix uteri, and prolapsus of that organ.*

A. Posterior labium of the os uteri considerably elongated and much more prominent than the anterior labium, B.
C. Pediculated excrescences of the prepuce of the clitoris.

Fig. 2. *Side view of the same cervix uteri.*

Fig. 3. *Crural hernia of the uterus.*

A. Left portion of the abdominal parietes viewed exteriorly.
B. Right portion of the same parietes viewed interiorly.
C. Pubic region.
D. Left thigh.
E. Right thigh.
F. Pudenda.
G, G. Envelope of the tumor opened and turned down upon the thigh.
H. The uterus turned down, and presenting its posterior surface in front.
I. Fallopian tube.

J. Left ovarium.
K. Right Fallopian tube.
L. Right ovarium changed into a cyst.
M. Another cyst, adhering to the right ovarium and to the uterus.
N. Fatty mass, adhering strongly to the uterus, to the sac, and continuous with it.
O. Elongations of the omentum, which are cut and turned down. *(These three figures are copied from the original designs of Professor* J. CLOQUET.)

Fig. 4. *Vertical section of the pelvis, representing* ANTEVERSION OF THE UTERUS *in the first periods of pregnancy.*

A. Right pubes.
B. The sacrum.
C. The bladder.
D. The urethra.
E, E. The rectum.
F. Section of the Fallopian tube, and of the ligament, on the left side of the ovarium.
G. Body of the uterus.
H. Lateral portion of the uterus, which is not covered with the peritonæum.
I. Os uteri.
K. Vagina.

Fig. 5. RETROVERSION OF THE UTERUS, *in the first periods of pregnancy.*

A. Right pubes.
B. Os uteri.
C. Canal of the urethra.
D. Vagina.
E. Body of the uterus.
F. The bladder at its greatest enlargement.
G. The sacrum.
H. Sacro-vertebral angle.
I. Section of the Fallopian tube, and of the ligament of the left ovarium.

PLATE XII.

Inversion of the uterus, occasioned by the hasty extraction of the placenta.

The replacement of the organ had been attempted, by several persons, without success. The patient entered the Maison de Santé on the sixteenth day after delivery.

Fig. 1.

A, A. Mons Veneris.
B, B. Labia pudendi.
C, C. Nymphæ.
D. Clitoris.
E. Meatus urinarius.
F. Anterior external border of the vagina.
G. Anterior border of the external orifice of the uterus.
H, H. Internal surface of the uterus become external.
I, I. Circular lines of the layer of concentric fibres.
J, J, J. Projecting points where the placenta had been attached.

Fig. 2. *The same uterus, as presented five years after the inversion.*

A. External orifice of the uterus.
B. Internal surface of the inverted uterus, presenting at its fundus some small reddish points.

During the twenty-four hours which followed the inversion, there was a profuse hæmorrhagy, which terminated in profound and long-continued syncope. Not only did the hæmorrhagy cease, but the lochia also were suppressed. The impossibility of passing the urine, and the consequent pains, were the only results of this serious affection. Reduction being impossible, and the urine at length passing spontaneously, the case was left to time and nature. The patient, who came to Paris for her confinement, returned home in fifteen days. It was not till five years afterwards, when she came to ask our advice respecting the return of the catamenia, that we were aware of that discharge having ceased, and ascertained, by examination, the state of the uterus.

PLATE XIII.

Complete obliteration of the cavity of the uterus, and transformation of the tissue of the organ.

The subject of this case was fifty years of age; she had been treated, some years previously, for cancer of the nose; she died of phthisis pulmonalis.

Fig. 1.

A,A, A. Tumors formed at the exterior of the fundus of the uterus; this organ is viewed at its posterior part. The three tumors, formed behind the peritonæum, were of a white, chalky, and very hard tissue. In order to cut through this, it was necessary to strike the scalpel repeatedly with the mallet. The surface was injected with innumerable blood-vessels, of a bright red colour, springing from their pedicle.

B, B. Fallopian tubes.

C, C. Ovaria in a healthy state.

Fig. 2.

The uterus of the former figure, divided laterally into two equal parts, did not present the slightest cavity; the whole of the organ consisted of a white, compact, solid substance, which cut like white soap, of which it presented the appearance and consistence. The patient had never been pregnant. (See the text, where several cases of the same kind are related.)

Fig. 3. *A portion of the uterus in the case of a person who died of apoplexy.*

The uterus, divided into two parts laterally, presented no cavity. A perfectly triangular line, A, A, A, of a bluish-white colour, and as hard as cartilage, marked the original cavity of the organ.

At the part B of the cervix, a longitudinal furrow denoted the cavity of this portion of the uterus. It was by this opening that the blood flowed, which had been discharged in great abundance on the preceding days, and which took its source behind the car-

tilaginous layer of the posterior paries of the organ : this hard and thick layer was separable at this part.

C, C. The Fallopian tubes were short but healthy.

D, D. The ovaria, of a deep yellow colour, were of a softish and fatty tissue.

E. On the left ovarium there was a cyst, as large as a plum, filled with yellowish serous matter.

PLATE XIV.

Interstitial fibrous tumors of the uterus. (This case had been mistaken for extra-uterine pregnancy.)

Three tumors of different sizes occupied separate parts of the uterus, imparting to it, by their form and situation, the figure of a Phrygian bonnet or of a cone.

A. Right lateral angle of the uterus, forming the summit of the cone.

B. Place to which the left lateral angle corresponds.

C. Right Fallopian tube.

D. Pavilion of the tube hypertrophied. When placed in water, its long and numerous fimbriæ presented, on their lateral borders, small threads resembling those at the edges of the branchiæ of fishes.

E. First tumor, presenting the form of a cone, its smaller extremity corresponding with the tubular orifice.

F. Second tumor, hemispherical.

G. Small portion of the third tumor, which was a flattened sphere.

H. Right ovarium.

I. Left ovarium

K. Right super-pubic ligament. The left ligament was a little backward, between the tumors G and F.

L, M. Multilobular and lardaceous tumors, formed within the cellular tissue.

N. Pediculated, hydatiform, transparent tumor, filled with yellowish and limpid serous fluid.

O, O. Fold of the vesico-uterine peritonæum.

P. P. Tubercles in a state of crudity.

Q. Os uteri, in its natural state, and of a brownish-red colour.

R. Portion of the vagina.

A line drawn from the angle A, to the orifice of the os uteri,

Q, would give the length and the direction of the cavity of the uterus; it constituted a narrow canal of eight inches in length. The uterus was moveable.

PLATE XV.

TUMORS OF THE UTERUS OCCUPYING DIFFERENT REGIONS OF THAT ORGAN.

Fig. I. *Interstitial fibrous tumor, with sanguineous congestion of the os uteri, and melanosis of the left ovarium. This was observed in a person who died of a chronic affection of the circulating system.*

A. Anterior surface of the uterus.
B. Posterior surface of the organ and seat of the tumor.
C, C. Right Fallopian tube curved.
D. Albuginous envelope of the right ovarium.
E, E. Right ovarium developed at its inferior border.
F, F. Fibrous bands proceeding from the ovarian ligament.
G. Opening made with the scalpel on the peritonæal membrane of the ovarium.
H. Black viscid matter contained in the ovarium.
I. Os uteri tumefied, and of a livid red colour.

Fig. 2. *Fibrous tumor from the former figure.*

This tumor, divided into two parts, presents its tissue consisting of several small bodies of greater or less hardness, the fibres of which radiated from the centre.

Fig. 3. *Fibrous tumor formed in the cavity of the uterus.*

This preparation presents several different affections in the various organs which compose the uterine system.

A. The os uteri, more than double of its natural volume, presents a rugated and rough surface; its tissue is extremely hard.
B. The cervix uteri developed, proportionably with the os uteri, is of a white and cartilaginous tissue; its internal surface is smooth, and does not retain the slightest trace of its rugæ.

C. Cavity of the uterus.

D. Bougie introduced into the orifice of the cervix, and penetrating into the cavity of the uterus.

E, E. Multilobular tumor occupying the cavity of the uterus, and adhering only by a very fine laminated tissue, easily permitting its isolation.

F, F. Parietes of the uterus, of a red and very elastic tissue, upon which its several fibrous layers are clearly distinguished.

G, G. Fallopian tubes.

H, H. Ovaria changed into two cysts, with fibrous, red parietes, filled with yellowish pus, of the consistence of pap.

I, I. Portion of the vagina.

(The subject of this case entered the Maison de Santé for *sciatica*, and died of pleuro-pneumonia.)

PLATE XVI.

AMENORRHŒA.

Tubercles in the cavity of the uterus and in its appendages, in a person sixteen years of age.

A, A. The uterus, opened on its right lateral border and on its fundus, presents a white tumor, B B, upon each surface of the organ.

B, B. This white, granulated, and apparently solid matter liquefies by scraping, and penetrates into the proper tissue of the uterus

C, C. Interior surface of the cervix uteri.

D, D. Interior, or mucous surface of the vagina.

E. Left ovarium, containing several irregular tumors.

F, F. Each of these tumors is composed of one or more cysts, containing a pultaceous, solid matter, like Dutch cheese.

G. Left Fallopian tube, shorter than the other, and healthy.

H. The right ovarium, soft and of a blackish tissue, contains only a mucous matter, of a deep blue colour, some bright red vessels, and a black body with a smooth surface, of the size of a filbert, and of a compact tissue.

I, I. The right Fallopian tube presents three swellings along its course, occasioned by the presence of three voluminous tubercles,K, each of which is furnished with an en-

velope or solid cyst. They are represented as divided through their substance. The tube was of a deep red colour, of a thicker tissue than usual, and generally more developed.

L. The pavilion of the tube, as well as its fimbriæ, are changed into a mass of granulated tubercles, of solid consistence.

M, M. The broad ligament on the right side is beset with numerous tubercles, in a solid state.

PLATE XVII.

Fig. 1. *Vesicular mole, with the fœtal membranes.*

This body represents, exteriorly, a reddish, spongy, oval mass, flattened at its opposite surfaces, without opening at the time of its expulsion from the uterus. Its volume was half the size here represented, the tumor being opened in the direction of its length, and presenting its internal surface.

A, A, A. Serous, or amniotic membrane. The chorion cannot be distinguished. The membrane appeared to us single.

B. Fold of this membrane, in which there was a small spoonful of serous fluid. At the time of the expulsion of the mass, it contained a certain quantity of this fluid.

C, C, C. Three small red tumors, as large as cherries, of solid consistence, containing a lardaceous substance.

D. Another pyriform tumor surmounted by a very small tumor of the same kind.

E. Pediculated transparent vesicle, beneath a great number of other vesicles, similar to those which compose the tissue of the whole mass.

F, F, F. Vesicles of the whole mass, situated at the exterior of the amniotic membrane.

Fig. 2. *Polypus, resembling the pendulum of a clock.*[1]

The subject of this case was an unmarried person, forty years of age. The tumor was firmly enclosed in the vagina; it was with difficulty drawn outward by the ring-forceps. Its tissue was lobulated, its surface uneven, and its pedicle several inches in length.

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[1] The operation was performed by Professor Cloquet, and copied from his original design.

A. Labia pudendi.
B. Clitoris.
C. Nymphæ.
D. Anterior border of the orifice of the vagina.
E. Semi-lunar segment of the hymen.
F. Body of the polypus.

Note. This case offers a new proof that the pedicle is not the result of the dragging occasioned by the weight of the tumor.

PLATE XVIII.

POLYPI OF THE UTERUS (MENORRHAGIA).

Fig. 1.

The uterus, double its natural volume, presents, at its exterior and on its fundus, three pediculated tumors, A, A, A.

B. Another small pisiform tumor appears at the orifice of the os uteri.

Fig. 2.

The same uterus, opened upon its right lateral border, presents, at the interior of its cervix, three small, red, pediculated bodies, each of which encloses a small cyst, containing a tenacious, colourless, albuminous matter.

A. Anterior paries of the uterus.
B. Anterior labium of the os uteri, longer than the other, at the interior surface of which there is a small polypus.

Note. The body and the cervix of the uterus were very soft.

Fig. 3.

A. Polypus occupying the orifice of the os uteri, and coincident with cancer of the right mamma. There was no catamenial or any other discharge.
B. Orifice of the os uteri.

Fig. 4.

The uterus considerably enlarged, strongly injected, of a very soft tissue, containing within its cavity a fibro-cellular tumor, A, adhering by a thin, adventitious membrane, B.

C, C. The cervix, very long, and of a pale violet colour.

Fig. 5.

A. Pediculated polypus inserted in the fundus of the cavity of the uterus, the separation of which was effected spontaneously. The patient died, some days after, of a pulmonary affection.
B. Pedicle of the polypus.
C. Border of the external orifice of the uterus.

PLATE XIX.

POLYPI OF THE CAVITY OF THE UTERUS.

Fig. 1. *Posterior portion of the uterus in the case of a person who died of an affection of the brain, on the second day after natural labour.*

A, A. Longitudinal section of the uterus.
B, B. Traces of the part where the placenta had been attached.
C. Polypus, with a spreading pedicle, F, of encephaloïd tissue.
D. Portion of the decidua.
E. Solid, pale yellow tubercle.

Fig. 2. *Pendulous polypus.*

A. Body of the polypus.
B. Small pedicle arising at the posterior and middle surface of the cervix uteri.
C. Portion of the cervix exterior to the vagina, D.

The base of this pedicle, E, presented the appearance of a small placenta; the tumor was knotted at its surface, and covered with a fine membrane and numerous veins.

Fig. 3. *Enormous hollow polypus removed by the ligature, by Professor Dubois.*

A, A, A. Folds formed by the ligature.

Fig. 4. *Vertical section of the same polypus.*

A, A. The section presents a tissue, composed of several fleshy, super-imposed, reddish layers.

B, B. The internal surface of the tumor presents a membranous appearance, and several furrows occasioned by the reduction of its volume.

C, C. Orifices opening exteriorly, and affording a passage to the blood and other fluids, which had distended the tumor before the ligature was applied.

D, D. Puckerings occasioned by the ligature.

This tumor appeared to us to consist of the concretion of some plastic fluid of the uterus, during a certain period when there was no catamenial discharge. The successive super-position of these pseudo-membranous layers formed a kind of sac, which served as a duplicature to the organ, of which it had assumed the form. This sac being probably detached, at first, by its fundus, ultimately presented itself at the orifice, and continued there like the inverted uterus.

This preparation was examined by several physicians, and mistaken for the inverted uterus. This latter organ was, however, ascertained to be in its natural situation.

PLATE XX.

POLYPI OF THE CAVITY OF THE UTERUS.

Fig. 1. *The uterus in the case of a person who had an abortion three months before death.*

A, A. The body of the uterus, of a pale red colour, very soft.

B. Small, softish, spongy, reddish body, adhering, by a very fine laminated tissue, to the interior surface of the uterus.

Fig. 2. *Preparation removed in the case of a person seventy years of age. All the lymphatic glands were considerably congested.—The uterus viewed at its posterior surface.*

A. Rounded, calcareous, uneven concretion, surrounded by the substance of the uterus.

B. Substance of the organ enlarged at its fundus, separated by a thin septum from the cavity of the uterus.

C. Septum of the cavity of the uterus.

D. A soft, vesicular, pediculated polypus, containing numerous small vesicles, filled with yellowish fluid, occupies the whole of the inferior cavity of the uterus, and is

attached to its fundus. (*The pedicle is not occasioned by traction of the polypus*, for this pedicle was folded upon itself, and the small polypus filled the whole cavity: in the figure it has been dragged downward.)

At the fundus of the uterus, four or five small vesicles are amassed together, filled with transparent fluid, and projecting upon the parietes of the uterus.

E. The cervix uteri presents no change; it is very narrow at its upper part.

F. A flattened, yellowish, soft body, attached to the uterus by a long vascular pedicle, traversed by several tortuous arteries. This body consists of several yellow granulations, and of some small concretions.

G. The vagina.

H. A hard, yellow, heavy concretion, as large as the fist, studded with tubercles, adhering by membranous ligaments to the anterior part of the uterus and vagina and to the omentum. This large tumor, when sawn across, presented a pale, fibrous, and very firm tissue, a small quantity of it united with uneven grains of calcareous, pale, friable, opaque tissue, and with another tissue still harder, yellowish, and semi-transparent. These three substances were closely blended together. The description and design are by M. *J. Cloquet*.

I, I. Fallopian tubes perfectly healthy.

K, K. Ovaria atrophied.

L. Omentum, weighing at least a pound and a half.

Fig. 3. *Pediculated polypus of the uterus.*

This figure is copied from Clarke. He considers the longitudinal depression to have been occasioned by the urethra.

The tumor is attached to the fundus of the uterus by a narrow neck. It has passed from the uterus into the vagina.

A. Fundus of the uterus. The anterior paries of the organ opened to shew the form and the point of attachment of the polypus.

B, B. Section of the os uteri into two parts.

C. Vagina.

D. The tumor.

PLATE XXI.

Scirrhus of the anterior labium of the os uteri.

This portion of the uterus had acquired this enormous volume without passing into a state of ulceration. The violent uterine hæmorrhagies, which caused the death of the patient, were occasioned by the excessive dilatation of the numerous vessels of the internal surface of the uterus. The uterus is viewed at its posterior paries.

A. Body of the uterus more than three times its usual size.
B. Posterior labium of the os uteri.
C, C, C. Anterior labium of the os uteri.
D, D, D. Vagina considerably enlarged; its rugæ effaced by the presence of the tumor.
E, E. Fallopian tubes in the natural state.
F, F. Ovaria, also healthy.

The ovarian vessels were very voluminous, and the broad ligaments strongly injected.

G. Portion of the bladder turned down.
H, H. Round ligaments, seen through the peritonæum.

PLATE XXII.

Vertical section of the uterus of the preceding plate.

This figure represents the substance of the anterior labium of the os uteri, and its extent. The orifice observed in Pl. XXI is here seen behind; it is marked by the probe A, which penetrates into the cavity B of the uterus.

The excessive thickness of the parietes of the body of this organ is remarkable.

C, C. Whitish granulations, which penetrate the tissue of the uterus.
B. Numerous orifices of the vessels of the cavity of the uterus, which occasioned fatal hæmorrhagy.
D,D,D. Section of the tumor formed by the anterior labium of the os uteri. Numerous hard and cartilaginous granulations are observed, of a bluish-white colour, with which the entire tissue of the organ was beset.

PLATE XXIII.

Fig. 1. *Scirrhous tumefaction of the posterior labium of the os uteri.*

This tumefaction was observed in the uterus of a person who died of tubercular phthisis, after an abortion in the sixth month.

A. Fundus of the uterus.

B. *Palm-like* disposition of the fibrous layers of the uterus during the progress of pregnancy.

C, C, C. Fallopian tubes grouped upon the posterior surface of the uterus, each of them representing a handle, in which the ovaria are infolded, strongly adhering to the posterior paries of the uterus, by means of numerous morbid folds of the broad ligaments.

D, D. Ovaria.

E, E. Broad ligaments.

F. Posterior labium of the os uteri, of scirrhous tissue, about an inch in thickness.

G. Hydatiform tumor on the left superior and exterior angle of the fundus uteri. This cyst, of the form and volume of a common fig, was transparent, and contained a serous yellowish fluid.

Fig. 2.

Scirrhous os uteri; its orifice widely open; its borders thin, hard, and obliquely eroded.

This state, observed in a person remarkably lymphatic, was accompanied with profuse leucorrhœa.

Fig. 3.

Tumefaction; induration of the os uteri, beset at its surface with livid spots on a violet-coloured ground. This state was also accompanied with profuse leucorrhœa.

The patient was fair and pale, with all the muscles soft and flabby. Her mother and sister, similarly affected, had just died of cancer of the uterus.

PLATE XXIV.

Fungous cancer, or cauliflower excrescence of the os uteri.

This affection is accompanied with profuse hæmorrhagies, and with an abundant secretion of limpid, inodorous and serous fluid.

Fig. 1.

A. Body of the uterus, supposed to be in the natural state; it will, however, be observed that the *posterior labium* of the os uteri is carried to the left, and that the *anterior labium*, converted into an enormous tumor, designated as *cauliflower excrescence*, is directed to the right.

B. Anterior paries of the body of the uterus.

C, C. Cauliflower excrescence of the anterior labium of the os uteri.

D. Posterior labium of the os uteri.

E, E. Portion of the vagina enlarged by the tumor.

Fig. 2.

View of the peduncle of the cauliflower excrescence after its separation by means of the curved scissors. A ligature had been previously applied to the neck of the tumor, in order to draw it beyond the os externum.

The section of this tumor presents a lardaceous tissue, which soon changed into a formidable cancer, of which the patient died in ten or twelve months after the operation.

A. Section of the peduncle.

B. Anterior labium of the os uteri.

C. Posterior labium of the os uteri.

D. Vagina almost returned to its natural state.

Fig. 3.

Another cauliflower excrescence, of less size than the preceding. It was attempted at first to draw the tumor to the os externum, by means of hooks, which had been inserted above on several occasions, and brought away at each time a portion of the tumor. On the following day the ligature was applied, as in

the preceding case, and excision was performed with the flat scissors. The whole of the os uteri was removed in this case, at the same time.

Fig. 4.

Excised portion of the cervix uteri of Fig. 3.

A. Inverted portion of the cervix, the thin and softened tissue of which admitted of its being brought down, so as to shew the granulations of the internal surface.

B, C. Probe passed into the cervix by its external orifice.

D. Anterior labium of the os uteri.

E. Posterior labium.

F. Portions of the tumor after its removal.

G, G. Portions of very fine membranes strongly injected with blood, which covered the tumor.

Fig. 5.

Cicatrix of the remaining portion of the cervix uteri, fifteen days after the operation.

Note. This latter tumor, after its excision, had lost its form and three fourths of its size. The former, which was removed entire, and at the first cut, retained nearly its complete size and form; only its bright red colour quickly disappeared after it had been immersed in water.

Its colour therefore depended on the membrane which enveloped it. It sank into the interstices of the granulations of the tumor, just as the pia mater sinks between the circumvolutions of the brain. When this membrane was removed, the tumor represented the granulated surface of the cauliflower excrescence.

PLATE XXV.

Fig. 1. *Excision of the cervix uteri.*[1]

This preparation has been the subject of a serious discussion. The patient had been affected with ulcer of the cervix uteri, which was ascertained to be cancerous, and which was removed with the

[1] This figure was communicated to us by Dr. Guillou.

scissors, by M. Bougon. Violent metritis followed, extending rapidly to the peritonæum, and the patient died in a few days.

On examination post-mortem, the one party still maintained that the disease was cancer; the other considered it only as a venereal affection, which might have been treated by milder and safer means; the latter attributed the ulceration of the posterior paries of the vagina to venereal ulcer, while the operator and his friends considered it merely as an injury produced by the use of the scissors. These are the details with which we were furnished by Dr. Guillou.

We have copied the preparation as carefully as possible; and we present it without further comment.

A. Section of the uterus on its anterior paries.
B. Place of the excision of the cervix.
C, C, C. Ulcerations of the surface of the vagina, whether occurring previously to, or after, the operation.
D. Small granulations observed at the surface of the vagina.
E, E. Substance of the parietes of the uterus. Tissue firm and natural.
F. Cavity of the uterus.
G, G. Super-pubic ligaments.
H, H. Fallopian tubes redder than usual.
I, I. Ovaria healthy.
K, K. Broad ligaments, their tissue thickened, and strongly injected.

Fig. 2. *Uterus in the case of an unmarried person.*

A. Uterus viewed at its posterior paries.
B. Rectum turned down, to shew the adhesions with the uterus.
C, C. Morbid membranes.
D, D. Tuberculous tumors, common to the uterus and to the rectum.
E. Right Fallopian tube obliterated, and adhering to the ovarium.
F. Right ovarium.
G. Broken cyst, presenting the form of the corolla of the convolvulus.
H. Left Fallopian tube in a morbid state, adhering to the ovarium.
I. Left ovarium hypertrophied.
J. Broad ligament.

PLATE XXVI.

Erosions, superficial ulcerations, miliary vesicles of the os uteri.

Fig. 1.

Uterus viewed at its posterior paries.

A. Sanguineous congestion of the os uteri.
B. Erosion of the borders of its orifice.
C, C. Superior portion of the vagina.
D, D. Recent cicatricules on the left ovarium. (The right ovarium, though healthy, was double its usual size.)

Fig. 2.

Os uteri in the case of a person twenty-four years of age, married, and without children, subject to abundant leucorrhœa. The epithelium of the os uteri was almost entirely removed. This portion of the cervix was almost invariably covered with an abundant secretion of puriform matter, proceeding from the interior of the uterus. The mother of this patient, after being affected, for a long time, with eruptions in different parts of the body, died of ulcer of the uterus.

Fig. 3.

Os uteri of the natural size, of a deep red colour, beset at its surface with miliary, whitish, soft, vesicles. This state was accompanied with irregularity in the catamenial discharge, and with hæmorrhagies.

Fig. 4.

Os uteri considerably tumefied; ulceration of great extent; abundant gonorrhœal discharge, accompanied with severe pains and alarming symptoms, as fever, vomitings, diarrhœa, hæmorrhagy, &c.

Fig. 5.

Tumefaction and ulceration of the os uteri; habitual leucorrhœa; frequent hæmorrhagies.

PLATE XXVII.

Different affections of the os uteri.

Fig. 1.

The case of a person eighteen years of age. Sanguineous con-

gestion, with white granulations at the surface of the os uteri; tissue soft; sanguineous transudation on pressure; abundant discharges in coitu. Herpetic affection suppressed at the catamenial period; vicious habit.

Fig. 2.

Granulated concretion; superficial ulceration; sanguineous congestion of the os uteri. Dysmenorrhœa cured.

Fig. 3.

Granulated concretion; erosion; dysmenorrhœa; discharge of blood in coitu; cure.

Fig. 4.

Considerable tumefaction; hardness of the os uteri; reddish spots at its surface; excessive tenderness; dysmenorrhœa. Successfully treated by antiphlogistics and sedatives. Afterwards, pregnancy and protracted labour, in consequence of the hardness and thickness of the parietes of the cervix. (The mother of this patient died of cancer of the uterus.)

Fig. 5.

Two small tumors, of the size of peas, on the anterior labium of the os uteri; tumefaction of this part of the uterus with sanguineous congestion. Bluish-red colour. This state coincided with tumor of the mamma, which resisted the treatment by compression. (The mother of this patient had been the subject of a serious affection of the cervix uteri, which had been cured by Dr. Marc.)

Fig. 6.

Tumefaction and tenderness of the os uteri. Its orifice surrounded with numerous transparent vesicles, similar to white currants, accompanied with abundant hæmorrhagies. These vesicles disappeared by means of styptic injections. The discharges became much less frequent, owing to a tonic treatment.

Fig. 7.

Os uteri of No. 6 viewed after the disappearance of the vesicles, after an interval of several months; the hæmorrhagy, however, returned; an abundant purulent discharge from the orifice, indicat-

ing ulceration at the interior of the cervix, which afterwards brought on complete perforation of that canal, and also of the bladder, and, shortly after, the death of the patient.

PLATE XXVIII.

Different diseases of the os uteri.

Fig. 1.

A. Sanguineous congestion, with excessive tumefaction of the anterior labium of the os uteri, which is surmounted with a fibrous crista, C, the bright redness of which contrasts with the brown colour of the part affected.

B. Posterior labium of the os uteri.

The subject of this pathological preparation was a person addicted to the use of fermented liquors and vicious habits. She had never borne children.

Fig. 2.

Gangrenous appearance of the cervix uteri after the spontaneous destruction of the tumor.

Fig. 3.

Os uteri considerably enlarged, very hard, knotted at its surface, and of a pale rose-colour; its orifice widely open, with angular and very hard borders. A state considered as the result of venereal affection. Abundant uterine hæmorrhagy; excesses and vicious habits; the patient had never borne children.

Fig. 4.

Induration, and slight tumefaction of the os uteri; pale rose-colour, smooth surface. The patient, subject for a long time to hæmorrhagies and abundant leucorrhœa. Excess. Ulceration existed at the interior of the cervix: no appearance of it at the exterior of the os uteri, near the orifice, until a few weeks before death.

Fig. 5.

Ulceration of the anterior labium of the cervix; the posterior labium much elongated. Pus issuing abundantly from the cavity of the uterus.

This state was accompanied with an abscess, formed in one of the ovaria, opening into the bladder; the patient having discharged,

by this passage, a considerable quantity of pus. The affection of the cervix has remained nearly stationary for the last seven years. (Patient of Dr. Espiaud.)

Fig. 6.

Scirrhus of the os uteri, accompanied with abundant discharges, pains in all the uterine organs, calculi in the bladder, and wens in different parts of the body. There was a wen on the top of the head, which had become inflamed, with such acute pains, that a crucial incision was made through the scalp.

Fig. 7.

Cancerous ulceration of the cervix uteri.

A. The organ viewed at its anterior surface.
B. Right ovarium, surrounded with the corresponding Fallopian tube.
C, C. Morbid adhesions of the peritonæum.
D, D. Left ovarium and Fallopian tube healthy.
E, E. Granulated portion of the borders of the ulcer.

Fig. 8.

Vertical section on the median line of the same uterus; its cavity limited to a slight furrow. On its white and thick parietes are observed several layers of lardaceous tissues, intermixed with bluish-white granulations.

PLATE XXIX.

Tubercles and ulcerations of the internal uterine organs; ossification of the uterine vessels. Total destruction of the cervix uteri.

Fig. 1.

The uterus viewed at its posterior paries, the body of which is more rounded and prominent than in its natural state, without being more voluminous.

A. Body of the uterus.
B. Left Fallopian tube surrounding the corresponding ovarium.
C. Left ovarium.
D. Ligament of the ovarium.
E, E. Morbid adhesions of the broad ligament.
F. Portion of the right ovarium.

G. Another portion of the right ovarium, the ulcerated surface of which displays the tissue, become tuberculous.
H. Rectum.
I, I. Tuberculous mass, ulcerated at the uterine surface of the rectum.

Fig. 2.

The same uterus, viewed at its anterior surface.

A. Fundus of the uterus.
B. Rectum.
C. Bladder brought down, in order to show the anterior surface of the body of the uterus.
D. Left Fallopian tube.
E. Portion of the left ovarium.
F. Left super-pubic ligament.
G. Right super-pubic ligament; at its root, ulceration and osseous concretion.
H. Right ovarium, adhering to the right lateral border of the fundus of the uterus.
I, I. Tuberculous and ulcerated portion of the right ovarium.
K, K. Right Fallopian tube.
L. Tubercles of the anterior and right lateral paries of the uterus.

Fig. 3.

Vertical section of the same uterus through its substance.

A, A. The cavity of the uterus is completely obliterated by a white, solid substance, of the consistency of suet.
B. Posterior paries of the vagina.
C. Tuberculous concretion on the internal surface of the vagina.
D, D. The cut borders of the orifice, remnants of the os uteri.
E, E, E. Uterine vessels mostly ossified.
F, F. Section of the right ovarium.

PLATE XXX.

Fig. 1. *Cancer of the uterus, with destruction of its cervix.*

A. Vertical section of the uterus, upon the median line, into two lateral portions.
B. The thickening of each paries, and the red colour of its lardaceous tissue is observed on the cut surface of each

portion. The only remains of the cavity is a slight furrow, occupied by a small pediculated fibrous body, C.

D, D. The bladder opened at its pubic paries, entirely destroyed by an ulcer of the same kind, the border of which, of a blackish grey colour, entirely resembled that of Fig. 2. The os uteri was not touched.

F, F. Hood of lardaceous tissue of three lines in thickness, cut out in regular festoons, presenting, on its unattached border, a dusky pale substance.

Fig. 2. *Uterus viewed at its posterior surface.*

Total destruction of the cervix uteri, of a portion of the Fallopian tubes, and of the ovaria, which were found glued on each side of the organ. The tubes were obliterated and attacked with cancerous disease, as well as the ligament of the ovaria, and the ovaria themselves.

A. Body of the uterus, without the least trace of cavity or of orifice.

B. The ulcerated portion, presenting an uneven surface, of a grey slate colour.

C, C. Concretions of a mixed dusky grey and yellow colour at the mucous surface of the vagina.

D. Tumor entirely fatty, of a deep yellow colour.

E, E. Ligaments of the ovaria ulcerated.

F, F. Fallopian tubes also ulcerated.

PLATE XXXI.

Lateral section of the pelvis.

Cancer of the uterus, of the rectum, of the posterior paries of the vagina, with total destruction of the os uteri, without preceding hæmorrhagy.

The subject of this preparation had been, for a long time, affected with obstinate constipation. The only results were borborygmi, intestinal colic pains, and violent pains in defæcation; the bowels acting only at intervals of 8, 12, and 15 days.

It was, after violent efforts induced by constipation, that the patient perceived the fæces to issue by the vagina.

It was difficult to ascertain the state of the parts; the posterior border of the orifice of the vagina, very thick and hard, rising nearly to the level of the inferior border of the pubes, we could scarcely introduce the finger into that canal.

Death soon terminated this distressing disease.

A. The uterus without the slightest trace of cavity. The tissue of which it consisted resembled white soap in colour and consistence.

B. The rectum. Perforation by thinning of the rectum.

C, C. Perforation of the tissue of the uterus from the fundus of the organ to its orifice, occasioned by the fœcal matters which excoriated this part.

M. Thickened portion of the rectum; its intimate adhesion with the posterior paries of the vagina. This latter canal also affected with the same disease.

D. Anterior and tumefied border of the vagina, favoring the retention of the fœcal matters in this passage.

E, E. Fœcal matter proceeding from the rupture denoted by the probe, F.

G. Anterior paries of the vagina.

H. Bladder.

I. Right pubes.

J. Right labium pudendi.

K. Sacrum.

L. Sphincter ani.

PLATE XXXII.

Fig. 1. *The uterus affected with softening and phlebitis in the case of a person twenty-three years of age, three weeks after delivery.*

This preparation, communicated to us by M. Collineau, is represented as opened anteriorly through its median line.

A, A. Longitudinal section.

B, B. Cavity of the body of the organ.

C, C. Section of the proper tissue of the uterus, of a deep red colour, and spongy like that of the spleen.

D. Portion of the placenta remaining attached to the uterus.

E, E, E. Veins with white thick parietes, so considerably dilated as to have been mistaken, at first, for tubercular abscesses: these canals were filled with viscid, yellow, and tenacious pus.

F, F. Fallopian tubes.
G, G. Ovaria.
H, H. Origin of the super-pubic ligaments.

Fig. 2. *Ureter occupied by a ramifying calculus.*

This figure represents the ureter occupied by a calculus, which, in consequence of its vicinity, occasioned contraction of the inferior vena cava, considerable dilatation of the veins of the pelvis, congestion of the uterine vessels, and, consequently, ulceration of that organ. The original design is from M. J. Cloquet, with the following explanation :

" I observed, in the case of a person fifty years of age, the ureter filled with a ramifying calculus ; this ureter is obliterated, and changed beneath into a large scirrhous ligament. The tumor which it forms, so compresses the inferior vena cava that this vein terminates in a funnel, and admits, at the most, of the introduction of a female catheter. Above, it is empty ; beneath, it is entirely filled with the solid fibrin which occupies all the space of the large veins of the pelvis, and of the upper part of the femora. At the lower part of the limbs, which are anasarcous, the veins contain fluid blood ; the large veins of the pelvis and of the thigh are filled with this fibrin, and lined with a false membrane, which adheres to the fibrin, as in aneurysm. The aorta is perfectly unattached ; there is abscess in the right lumbar region. Considerable infiltration in the back and in the pelvis. All the organs contained in the pelvic cavity,—the uterus, the Fallopian tubes, the lymphatic glands,—are congested and scirrhous. The pus of the abscess is of rather a faint odour : I do not think it proceeds from caries."

A. Right ureter.
B. Dilated point.
C. Ramifying calculus.
D. Obliterated and scirrhous extremity of the ureter.
E. Inferior vena cava.
F. Its strangulated portion.
G. Internal iliac veins.
H, H. Internal surface of the internal iliac veins.
I. Inferior aorta.

K. Internal iliac artery, drawn aside in order to shew the disposition of the ureter and the compression which it has caused on the trunk of the vena cava.

L. Internal iliac artery of the left side.

Fig. 3. *Varicocele of the super-pubic ligaments.*

This varicose state of the two round ligaments, of which one specimen only is here given, was observed in the case of a person sixty years of age; the knotted, tortuous veins, entirely filled the inguinal canal; the appearance of the tumor which these varicose ligaments formed, caused us to suspect the existence of two inguinal hernial sacs. (Copied from the original of M. J. Cloquet.)

A. Inguinal canal.

B. Varices of the veins of the super-pubic ligament.

C. Fibrous tissue of the ligament.

PLATE XXXIII.

Fig. 1. *Melanosis of the Fallopian tubes, with obliteration of their orifices. Sanguineous congestion of the uterus. Miliary vesicles on the os uteri.*

The subject of this affection was brought, in a dying state, to the Maison de Santé, in September, 1831, having been affected for some days with hemiplegia, and in a state of imminent suffocation.

On post mortem examination, all the viscera were found to be emphysematous.

A, A. The uterus, of twice its usual size, of a deep red colour, and of soft tissue; its internal surface exuding, on pressure, *innumerable* small drops of blood. (The patient had been subject, for some time, to abundant uterine hæmorrhagies.)

B, B. The miliary vesicles on the os uteri, relieved on a livid-brown ground-work.

These vesicles contain a tenacious mucus.

C, C. The Fallopian tubes, of the volume of a small hen's egg, were obliterated at their unattached extremity. 1. The fimbriæ were partly enclosed in their pavilion. 2. The

interior of these two canals was injected with matter of a deep blue colour; they were furrowed in the direction of their length by greyish cristæ.

D. The right ovarium also contained blackish vesicles of a mucous tissue, of the same colour; it also contained a black, oval body of compact tissue, and of the volume of a small hazel-nut.

E. The left ovarium hypertrophied, of twice its usual volume, otherwise healthy.

F. On the external surface of the body of the uterus, a long membranous vesicle was filled with a serous and yellowish humor.

This state of things appeared to us to be that which precedes dropsy of the Fallopian tubes and of the ovarium,—a state which might be termed *melanosis*.

The 2d, 3d, and 4th figures represent the ovaria in the case of a person who died of confluent variola, in the seventh month of pregnancy.

Fig. 2. *Right ovarium with a reddish-brown tumor.*

A. Reddish-brown vascular tumor.

Fig. 3. *The same viewed interiorly.*

A. Vascular membrane of the tumor.

B. Cyst, containing a black solid substance.

C, C. Other small cysts, containing the same substance.

Fig. 4. *Left ovarium of the same subject.*

A. Recent cicatrix.

PLATE XXXIV.

Dropsy of the left Fallopian tube and ovarium.

The subject of this disease was a young woman who had been erroneously supposed to have been lately delivered.

A. Left Fallopian tube, adhering at C to the posterior paries of the bladder.

B. Numerous vessels, of a bright red colour, are observed in the tube.

D. Pavilion and external orifice of the tube obliterated. The fimbriated borders have entirely disappeared.

E, E. Left ovarium enlarged in the form of a thick voluminous cyst, adhering to the rectum by false membranes, F, F.

G. Right ovarium, folded, hard, rugated at its surface; it is opened in the direction of its length, in order to shew its cavity, which contained a little puriform matter.

H. Right Fallopian tube in its natural state.

I. Body of the uterus.

K. Os uteri.

L. Vagina opened in the direction of its length.

M. Right broad ligament.

N. Rectum.

O. Canal of the urethra.

(The subject of this case is treated of in my *Mémoire sur les causes de l'avortement*, observation xx, p. 96.)

PLATE XXXV.

Two cases of encysted dropsy of the Fallopian tube.

Fig. 1. *Dropsy of the right Fallopian tube.—The uterus viewed at its posterior paries.*

This preparation was observed by M. J. Cloquet, in the case of a person fifty years of age.

A. Dilated Fallopian tube, tortuous, and becoming gradually smaller, so as to terminate, near its insertion in the uterus, by a cavity, with thick whitish parietes, and by cellules *not communicating with the uterus.*

The surface of the tube was beset with numerous vessels.

B. Serous cyst of the ovarium, adhering to the enlarged portion of the Fallopian tube.

C. The ovarium.

D. Ligament of the ovarium. The fluid contained in the tube was yellowish and transparent.

Fig. 2. *Cancerous polypus—Dropsy of the two Fallopian tubes and ovaria—Uterus depressed at its fundus, viewed at its anterior surface.*

The subject of this case was sixty years of age.

A. Cancerous polypus, supported by a large white pedicle of firm fibrous tissue, inserted in the fundus of the uterus, continuous with the fundus, which it inverts, so as to impart to it the form of a funnel, B. This polypus unites insensibly with the tissue of the uterus. Below, it spreads out into soft, pultaceous, red-brown fimbriæ, beset with numerous vessels, and terminating in a putrid mass, C, C. The size of this polypus causes a considerable enlargement of the vagina, D, which presents scirrhous fimbriæ.

E, E. The cervix uteri is much dilated (of the size of a crown-piece), fibrous, elastic, allowing the fundus of the organ to pass at the part where this latter is continuous with the pedicle of the polypus. The mucous membrane of the vagina, swollen, soft, and pulpy, presents slight superficial ulcerations, and some growths like a cock's comb.

The left Fallopian tube is dropsical. It forms a tortuous cyst, of little volume at the part where it corresponds with the preceding tubercle, and where it terminates in a swollen, tortuous cul-de-sac; at the other extremity, folded upon itself, F, it is curved below and behind, and is attached to the surface of an oblong cyst, formed by the ovarium, G.

This Fallopian tube is filled with a yellow mucous fluid, resembling jelly, and of a faint odour. Here, the internal extremity of the tube terminates in a kind of cul-de-sac, H; and the external, by a considerable swelling, in which are still observed the fimbriæ of the pavilion, which project inwards, I.

This dilatation communicates, by a large rounded orifice, to another small cyst, attached to the circumference of the cyst of the ovarium, G.

G. The cyst of the left ovarium is oblong, with white, thick parietes, without communication. The ovarium is attached, and stretched above. The cyst is wrinkled, and flattened on itself. Beneath, there is another cyst, filled with tuberculous matter.

K. The right Fallopian tube presents a sensible, but less considerable dilatation. It also terminates in a cul-de-sac, L, at the distance of two inches and a half from the uterus. Its other extremity, contracted, communicates with a small cavity, M, formed by the pavilion.

This cavity presents a small sinuous opening,—a small canal of a blackish colour, which, in its turn, opens into the large cyst of the corresponding ovarium, N. The fluid passes easily by this small canal of the cavity of the Fallopian tube, L, into that of the cyst, N. This cyst is nearly empty. The liquid which it contains is very little, serous, fluid, and not at all glutinous. (This description, as well as the two figures, are taken from Professor J. Cloquet.)

Fig. 3.

The same uterus, viewed from above, presents a triangular cavity, formed by three large folds, and capable of admitting the finger. It passes through the cervix of the organ.

H. A large scirrhous tubercle, resembling, in its physical properties, the verrucæ of the skin, is nearly involved in this cavity of the uterus. This scirrhous tumor, H, corresponds with the insertion of the Fallopian tube, and entirely obstructs it.

PLATE XXXVI.

Tubular pregnancy observed at the Maternité, in the case of a young woman, in 1816.

The fœtus was developed in the left Fallopian tube. After the spontaneous rupture of that canal, which had served as an organ of incubation, the patient soon died. The fœtus was found situated on the left iliac fossa, F, F.

The uterus, soft, red, and voluminous, was lined with a reddish pulpy membrane.

A. Large lobe of the liver.
B. Gall bladder.
C. Stomach.
D. Omentum adhering to the left Fallopian tube.
E. Intestines.

F, F. Cyst formed by the left Fallopian tube.
G. Body of the uterus.
H. Fœtus.
I. Umbilical cord.

This figure is taken from the original design of M. J. Cloquet.

Note. By a mistake of the engraver, the letters C, C, C, which denote the intestines, are applied also to the omentum, the adherent portion of which is marked D. Mark also with D, D, the large raised portion of the omentum improperly denoted by *e*, *e*.

PLATE XXXVII.

Fig. 1. *Different affections of the ovarium in the incipient state.*

Ovarium in the case of a young unmarried woman, eighteen years of age, who died of pulmonary phthisis. The catamenia had only appeared for a few months.

The right ovarium, very voluminous, presents, on its superior surface, a transparent cyst, of the size of a large plum, containing a yellowish and slightly mucous fluid. The interior of the ovarium, when divided, presented numerous colourless vesicles. Another cyst, as large as a pea, also transparent, was suspended by a long thread to the border of the ovarium.

Fig. 2.

Ovarium in the case of a person, lately married, who died of typhoid fever.

Fig. 3.

The same ovarium, divided through its substance, shews the section of the small tumor of the first. This organized body is the *corpus luteum*.

Fig. 4.

Inflammation of the ovarium. Each vesicle was injected with bright red, and extremely fine vessels.

Fig. 5.

Ovarium, of the size of a large egg, in the case of a person eighteen years of age, lately delivered at the full term. She had

returned to her business of a washerwoman on the eighth day after delivery, during a very severe cold. She died on the fifteenth day, of uterine hæmorrhagy and violent epistaxis. The vesicles were very voluminous, and of a white pearly colour, surrounded with mucous fluid, similar to that which they contained.

Fig. 6.

A young person, also a washerwoman, who died of meningitis, had been irregular from the first period of the catamenial discharge. The uterus was atrophied; the two ovaria were very voluminous, white, of a soft tissue, containing transparent vesicles. In the left, there were some hydatiform bodies, of the size of hazel-nuts, and containing a transparent, viscous fluid.

Fig. 7.

Right ovarium of the same subject; rather less in size than the other: the vesicles, less in volume and more in number, containing a fluid of the same kind.

Fig. 8.

This preparation was made from a person eighteen years of age, who died of acute gastro-enteritis. This person had experienced some vexation relative to marriage.

A. Uterus of a deep red colour.
B. Body of the uterus enlarged, and of a firm tissue.
D. Os uteri.
E, E. Fallopian tubes of a bright red colour and much enlarged.
F, F. Alæ of the ovaria.
G, G. Ovaria of twice the natural size, knotted at their surface, resembling, in reference to their granulations and colour, two cassia pods: the surface of each division was black, and represented greyish circles, formed by the vesicles which were cut in different directions.

PLATE XXXVIII.

Uterus in the case of a person twenty-six years of age, supposed to have been pregnant at the middle of the fifth month, and who died of entero-peritonitis. She had never borne children.

A. The uterus, viewed at its posterior paries, was nearly twice

its natural size. Its tissue was of a deep red colour and softish; its orifice natural.

B. Right ovarium, spherical, and as large as the fist, filled with a solid, viscid, greenish matter, of pungent odour. The cyst, exteriorly, of a violet-brown colour, was about a line in thickness; its internal surface was lined with a fine and consistent membrane.

C. Left ovarium, conical, and of the size of a large swan's egg, and of soft tissue, was filled with viscid pus, of a pale yellow colour, and very tenacious. This organ was covered with putrid matter, and adhered to the sigmoïd flexure of the colon.

D. Matter contained in the cyst.

PLATE XXXIX.

Disease of the two ovaria in the case of a person twenty-two years of age.

The right ovarium, weighing seven pounds, had acquired this extraordinary increase in nine months; pregnancy was suspected, from the pains which occurred at the close of that period. The inferior extremity of the tumor, being low down in the pelvis, was mistaken by some accoucheurs for the head, and, by others, for the femora of the fœtus. The late M. Désormeaux ascertained that it was an extra-uterine tumor, the nature of which was difficult to be determined. The patient was brought to the Maison de Santé, and we were enabled, though with much difficulty, to discover that the uterus was unimpregnated. The patient died in twenty days, of peritonitis[1].

Post-mortem examination. The small intestines were thrown to the left; the superior border of the tumor, A, was in contact with the large lobe of the liver, which was covered by it to a great extent. This mass was adherent only by a membrano-vascular tissue, excessively relaxed at the Fallopian tube, on the same side, B, B.

The Fallopian tube was very red, and of a volume and length proportioned to the morbid enlargement of the ovarium.

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[1] See *Mémoire sur l'une des causes de l'avortement;* observation XXVI de fausses grossesses, p. 123.

C, C. Mammiform swelling of the tumor, occasioned by an accumulation of limpid serum.

D,D,D. Smaller swellings, also filled with serum.

E, E. Inferior region of the tumor, enveloped with the peritonæum, in a state of inflammation.

F. Uterus atrophied.

G. Vagina thrust backward, together with the uterus, and covering a portion of the tumor.

H. Left ovarium, transformed into a mass, consisting of hard bodies, close to each other, presenting at their surface some unevennesses, indicating the distinctness of each portion of the tumor.

I, I, I. The pelvis.

K. Symphysis pubis.

PLATE XL.

Different affections of the external generative organs.

Fig. 1.

Encysted tumor of the right labium pudendi, accompanied with cancerous affection of the uterus, and total destruction of the cervix of that organ.

A. Labium pudendi tumefied.

B. Labium in its natural state. Left nympha; that on the opposite side is effaced. (Copied from the original design of Professor Cloquet.)

Fig. 2.

Vertical section of the pelvis, representing a portion of the uterine system, and of the organs affected by a recto-vaginal fistula, which communicated from the rectum, behind the vagina, to the inferior border of the right labium pudendi.

A. Right labium pudendi.

B. Vagina.

C. Cervix uteri.

D,D,D. Body and fundus of the uterus.

E. Anterior labium of the os uteri.

F, F. Rectum; very thick tuberculous ring, the cause of the first contraction of the rectum.

G. Contracted portion of the rectum.

H. Fistulæ.

K. Fundus of the bladder.
L. Articulated surface of the right pubes.

Fig. 3.

Encephaloïd tumor of the meatus urinarius, treated with antiphlogistics, the compression by means of a urethral bougie, and the excision of the tumor, partly atrophied.

A. Multilobed tumor.
B. Meatus urinarius.
C. Orifice of the vagina.
D, D. Nymphæ.
E. Clitoris.
F. Labia pudendi.

Fig. 4.

Fungous tumor of the meatus urinarius, removed with the curved scissors.

A. Red, soft tumor.
B. Orifice of the meatus urinarius.

We have met with several cases of this kind, which were cured by excision and cauterization.

Fig. 5.

Pancreatic cancer of the pudenda, in the case of a person who died of tubercular affection of the lungs, of the liver, and of the uterus.

A, A, A. Lobules of the nymphæ. B, B, B. Lobules of the clitoris.
C, C. Labia pudendi. This entire mass, supported by a common pedicle, could be raised in front of the pubes; this was the patient's resource for passing the urine.

Fig. 6.

The os externum closed by a long cicatrix, in the case of a person sixty-six years of age. The labia pudendi had been, for a long time, the seat of an eruption, accompanied with insufferable itching; the patient, who lived with her husband for thirty years, had never borne children.

A, A. Cicatrix indicating the union of the labia pudendi. The meatus urinarius alone remains free.

PLATE XLI.

Hæmatode cancer of the clitoris, and the SPECULUM BRISE *of Madame Boivin, with the new and successive improvements made in that instrument*[1].

Fig. 1.

The clitoris, as affected a long time with pruritus, inducing re-

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[1] 1. It is nearly a year since the early part of this work, containing some observations upon the speculum, p. 33, was published. Several persons have claimed the merit of the improvements which really belong to us. The following are the changes which this instrument has undergone, previously to its appearance as represented in the present plate.

In 1819, the speculum of M. Récamier consisted of a simple, polished, pewter tube. M. Dupuytren added a bent handle of the same metal; about the same time, M. Dubois made a large slope on the exterior edge, in order to examine urinary fistulæ. Such was the form of the instrument when we first used it, as witnessed by Professor Duméril, at the *Maison Royale de Santé*.

It was also in the service of M. Duméril that I further sloped the uterine part of the tube, for a case of disease of the cervix uteri.

1819. 2. At the same period, and at the same place, I caused the tube to be divided into two equal parts, in the direction of its length; these two parts, shaped like grooves, were re-united at their edges by a ringed forceps, the bowed branches of which were fixed and soldered at the exterior extremity of each portion of the tube. The speculum, being thus reduced in size, was much more easily introduced, and might afterwards be separated to any degree; it was then fixed by means of a screw, placed at the point where the ringed branches of the instrument joined.

1821. I was now obliged to add an extra top *(un embout)* of pewter, which, covering the uterine edges of the instrument, prevented the turning back of the mucous membrane of the vagina, which often causes great pain.

1823. The ringed branches rendering the instrument inconvenient to carry about, I replaced them by a box made of copper, which was soldered on the exterior edge of the left groove; this box is intended to receive an elbowed pothanger, soldered on the right groove; the hook moved in the box by means of a watch pinion, with wheels catching each other, on a pivot, adapted to the notch of the hook; the pivot, placed on the outside, at the centre of the horizontal lever, by means of a key, made the cursor of the hook move from left to right. A latch, placed near the wheel of the moving point, served to fix the two grooves at the degree of distance which had been obtained.

In 1829, I caused the instrument to be made of silver, with a long slope on it, shut by a plate, which slides in an external groove, and can be taken off after introduction, either for examination of the vagina, or for the application of leeches or other remedies to some part of that canal.

In 1832, I added a slight bending to the horizontal branch, and the grooves opened still more at their internal extremity. This last instrument, which is made of nickel, appears to me perfectly adapted for the examination of the internal generative organs. It is made by Samson, mechanical cutler, at the *Rue de l'Ecole de Medécine*.

peated irritation and necessitating cold applications, sometimes of oxycrat, with only transient relief. This state was followed by hæmorrhagy, supposed to be from the uterus.

The patient was mistaken in the nature of the affection: the tumor, formed by the clitoris, projected into the middle of the os externum, and rested on the meatus urinarius; thus, each act of micturition was excessively painful.

This granulated surface, of a reddish-brown colour, and bleeding on the slightest contact, indicated, in our opinion, excision as the only means of cure. This was performed by M. Jobert, and the patient perfectly recovered.

A. Body of the clitoris.
B. Granulations.
C. Meatus urinarius.
D. Vagina.
F, F. Labia pudendi.

Fig. 2.

Levier fenêtré (windowed lever or vectis), to bring the cervix uteri to the centre of the vagina, in those cases of displacement in which the os uteri cannot be seen through the opening of the speculum.

Fig. 3.

A, A,A. *Speculum* closed, and prepared for introduction in vaginam.
B, B. *Cursor* or horizontal arm.
C. Pivot.
D. Latch to fix the instrument.
F. *Embout*.
G. Ring of the stem which bears the *Embout*.

Fig. 4.

The *Speculum* opened.

B. Cursor.
C, C. Key adapted to the pivot.
D. Latch.
E, E. Plate with grooves; the *embout* and its stem, which can be pushed in or out, after having turned the key two or three times.

Note. We shall consider the instrument as having two extremities; we shall call that the *uterine* which touches the uterus, and bears the *embout;* we shall speak of the other as the free extremity, because, in fact, it remains free, exteriorly, during the application of the instrument.

END OF THE EXPLANATION OF THE PLATES.

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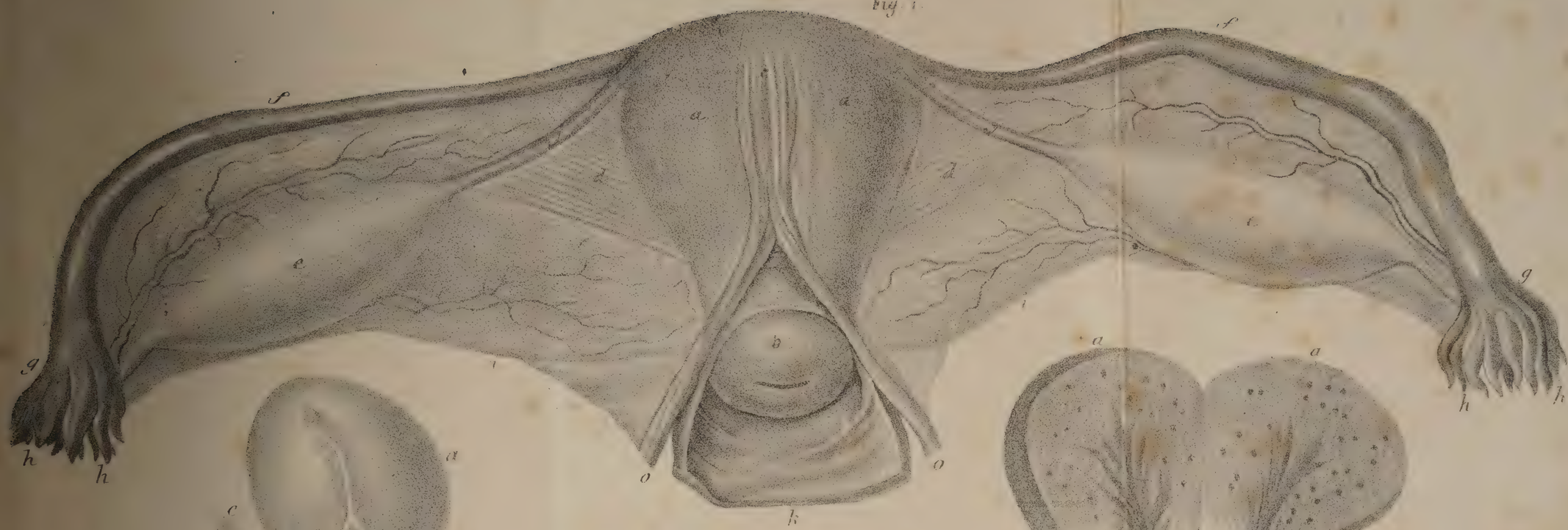
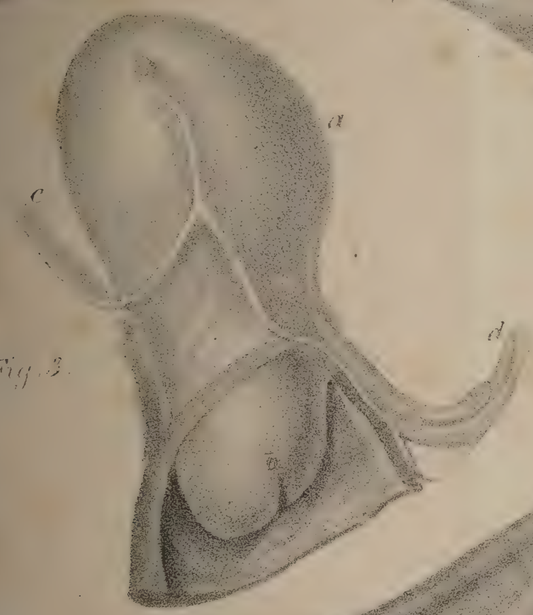
Fig. 1.





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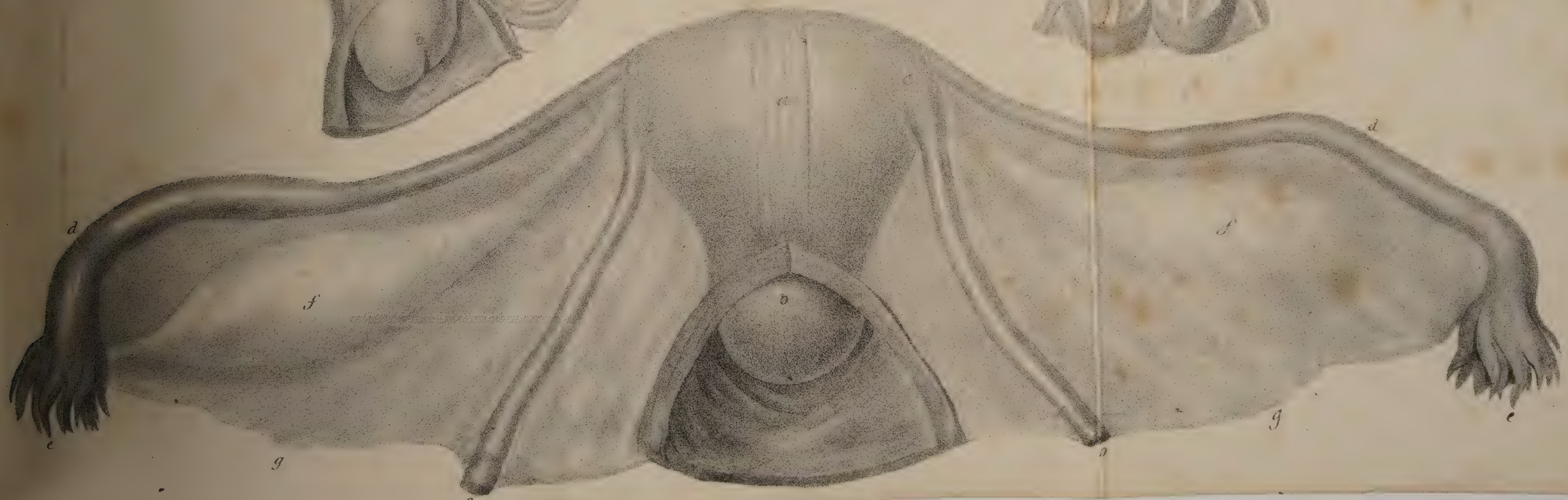

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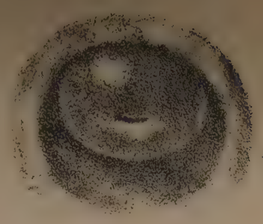

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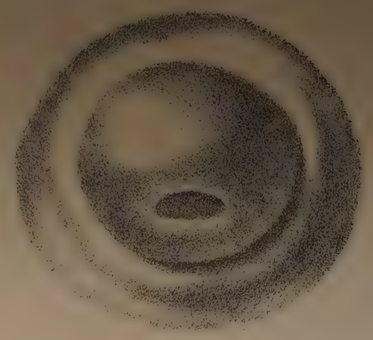

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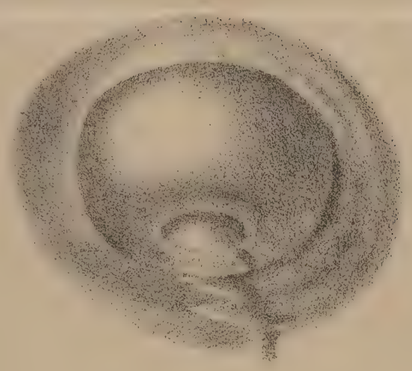

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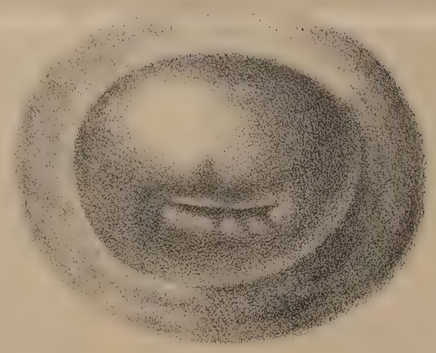

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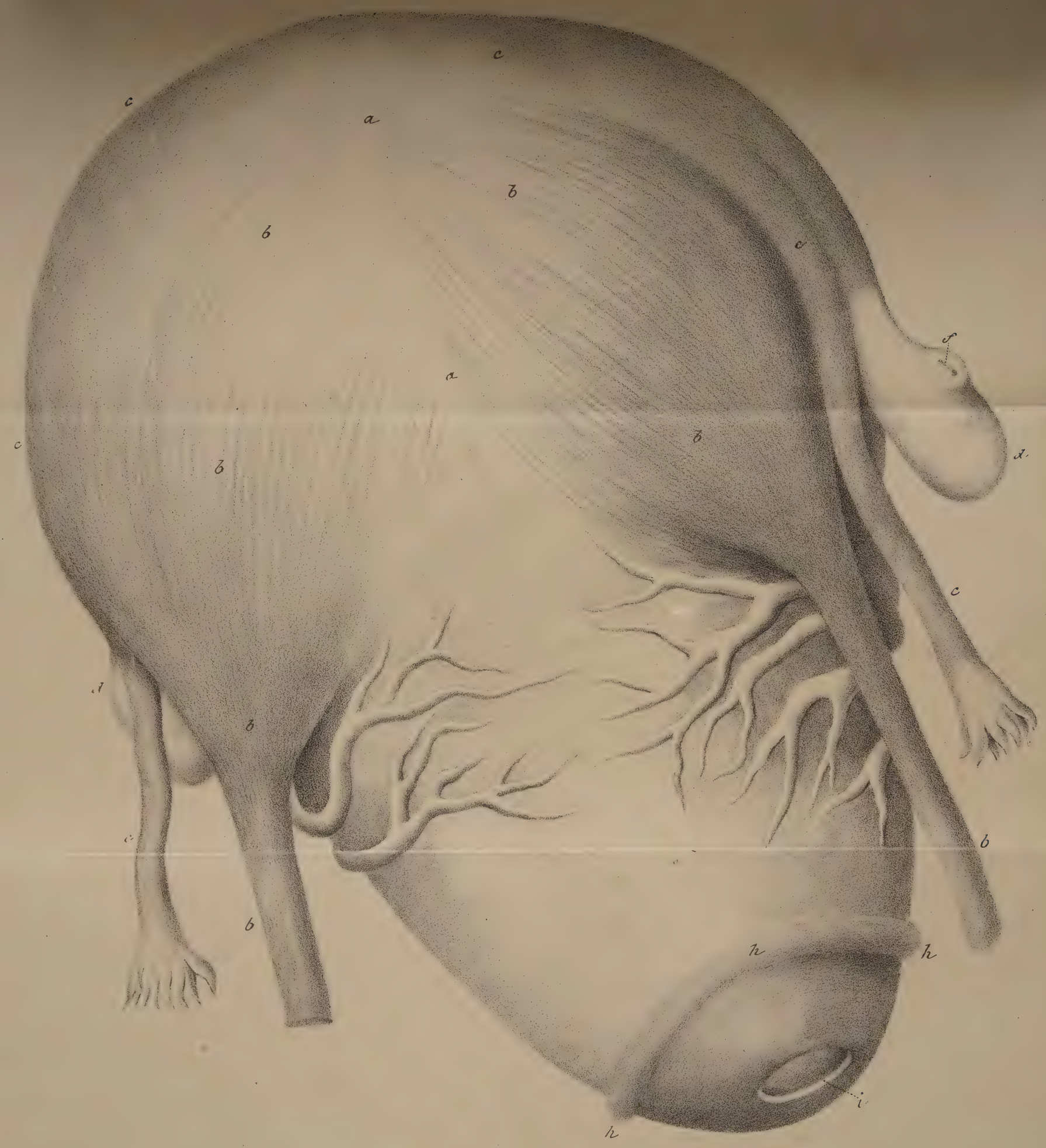
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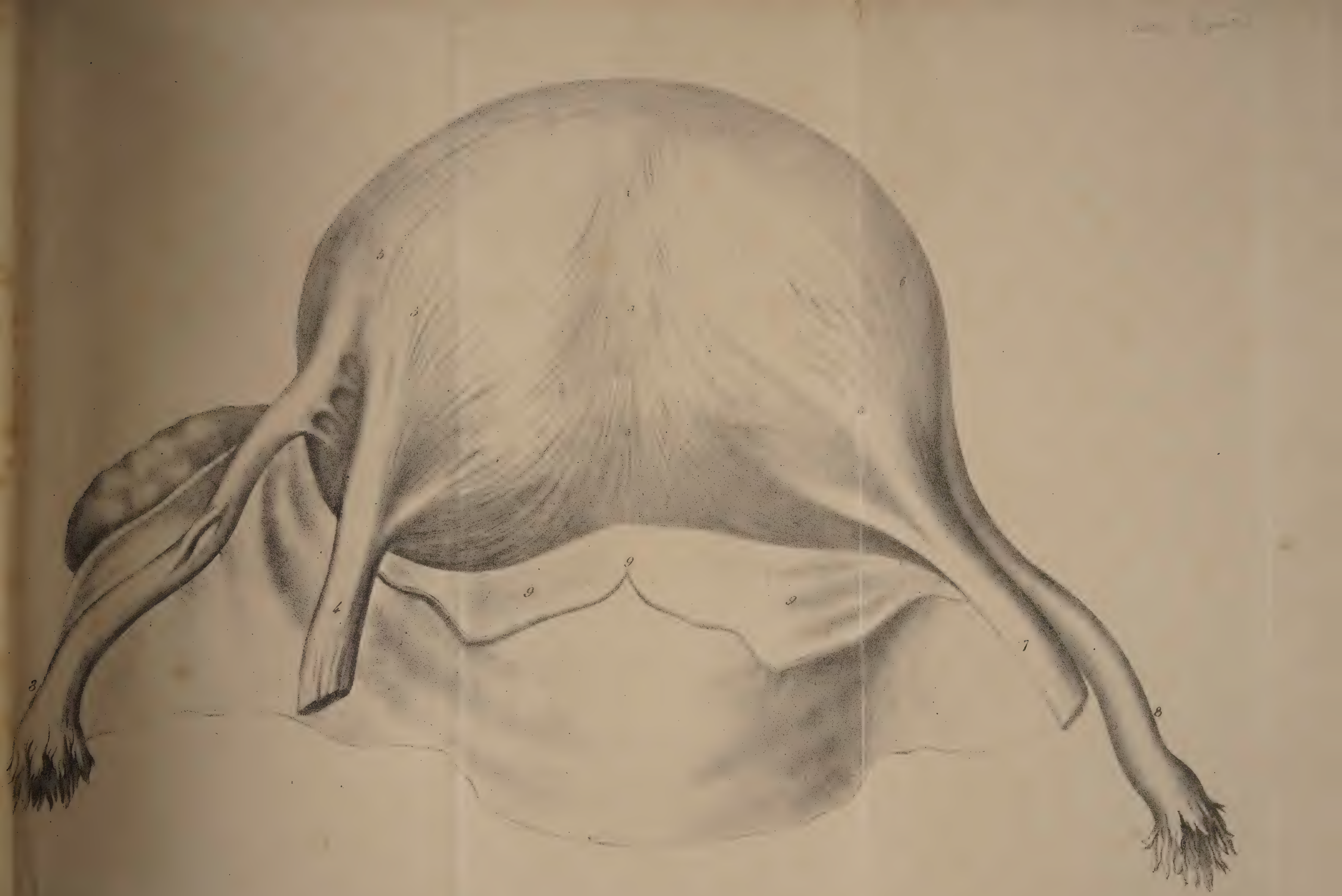
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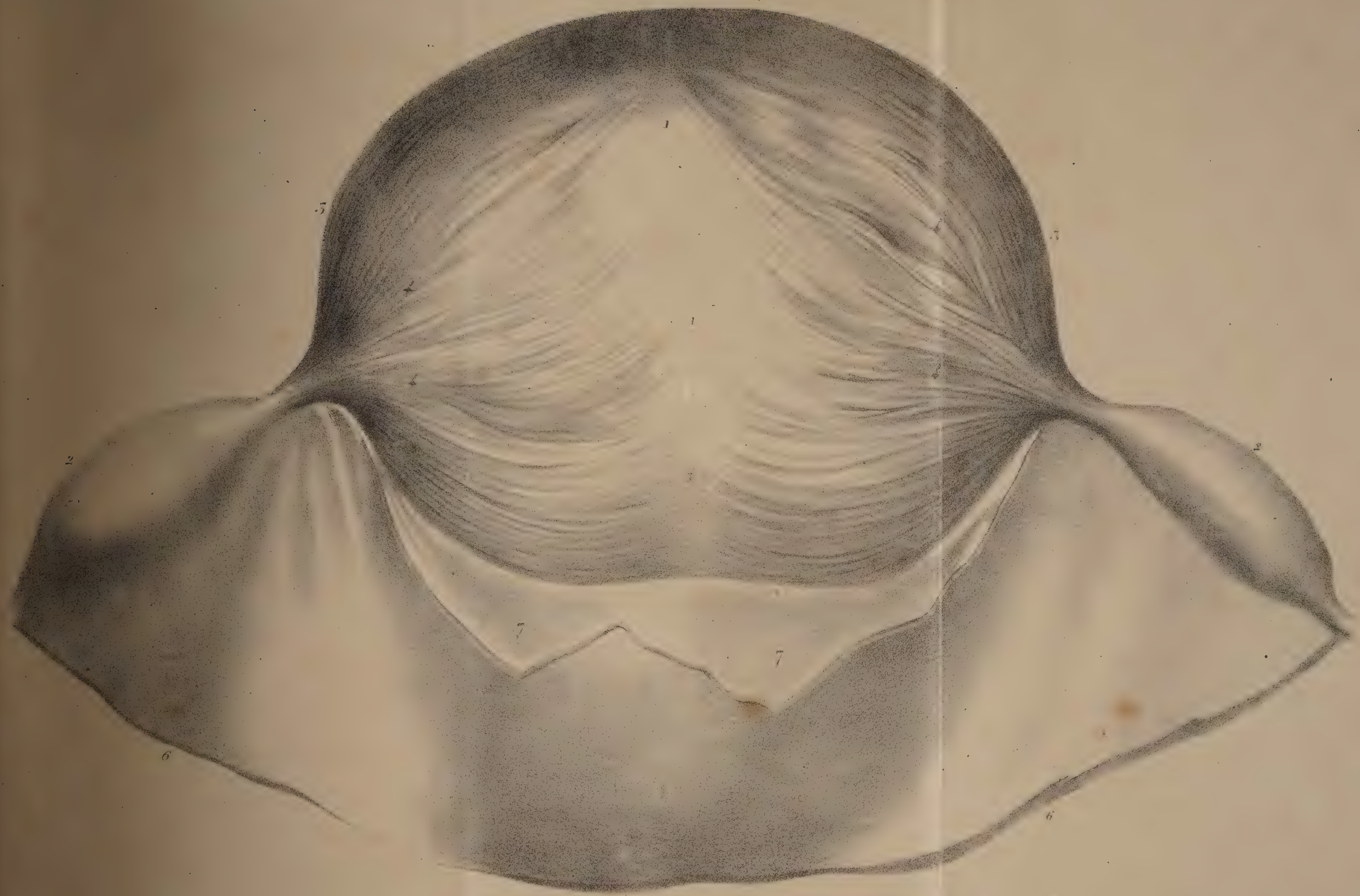
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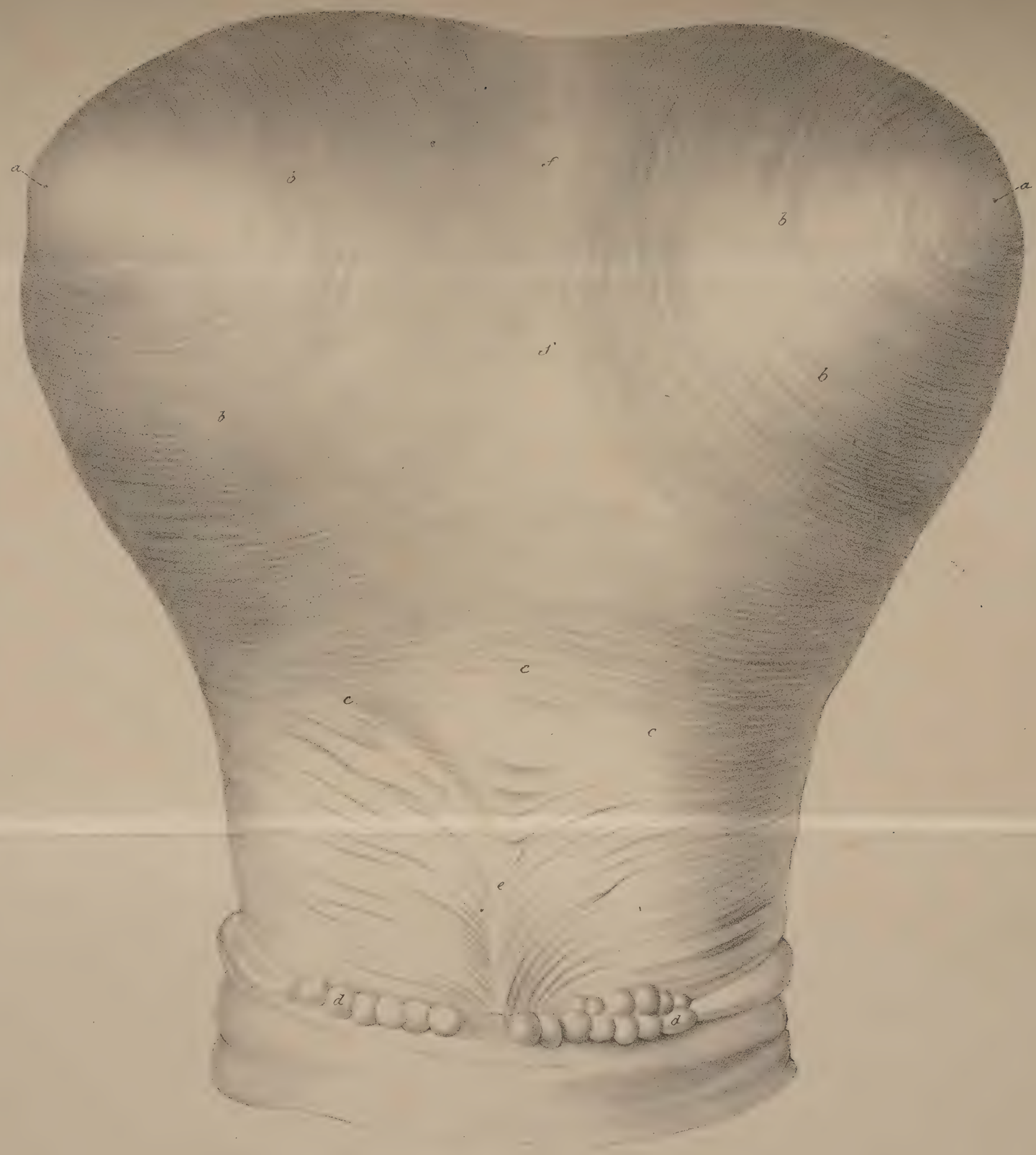

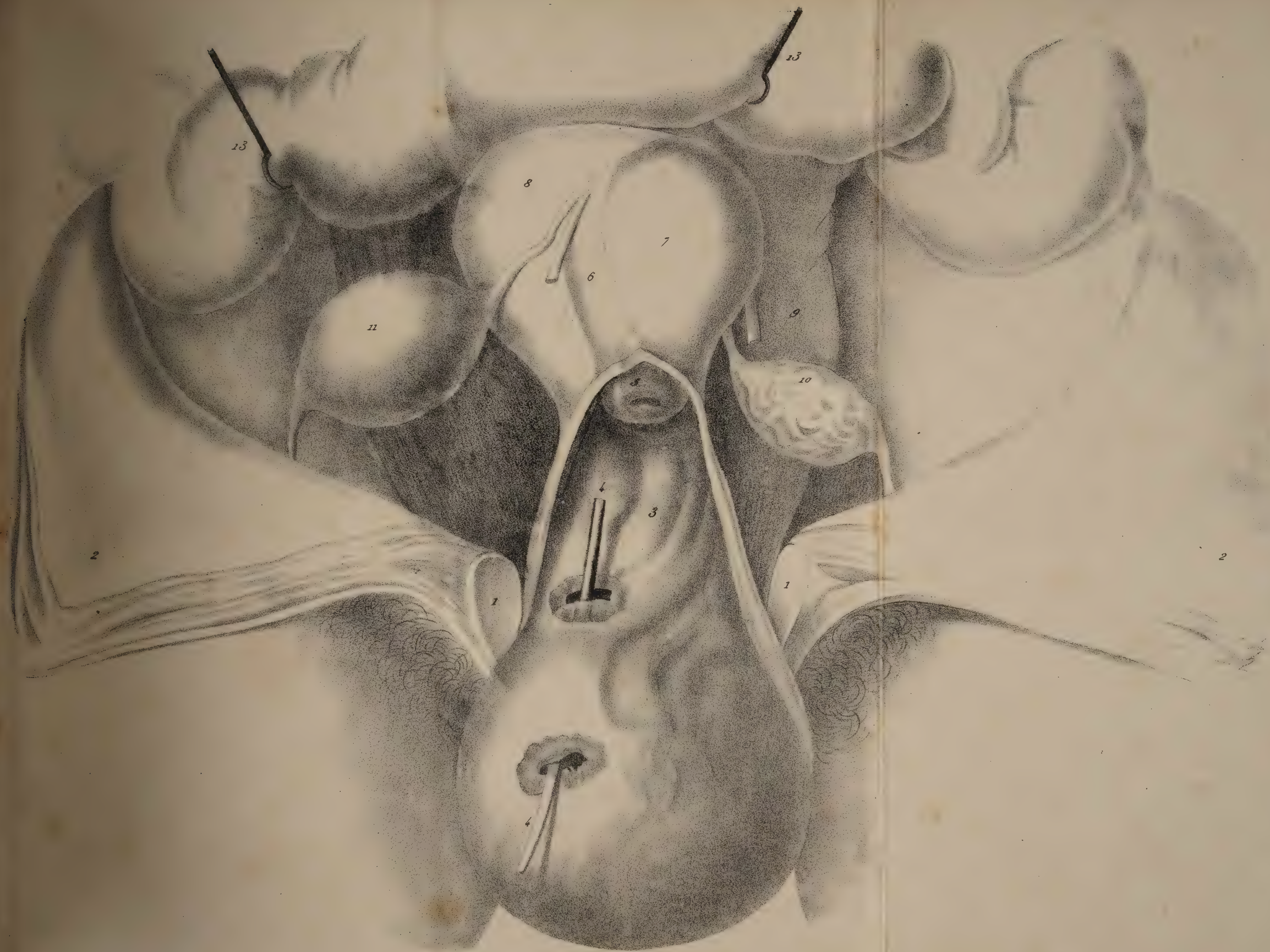
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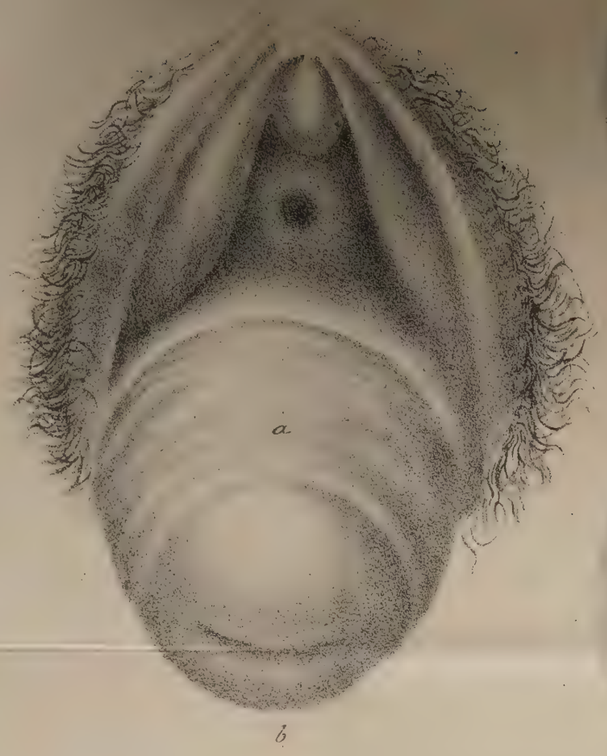

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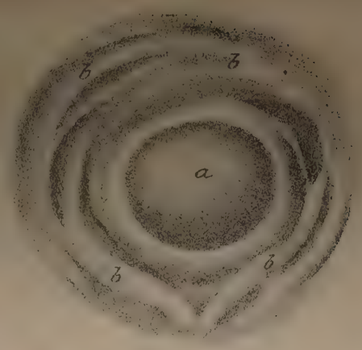

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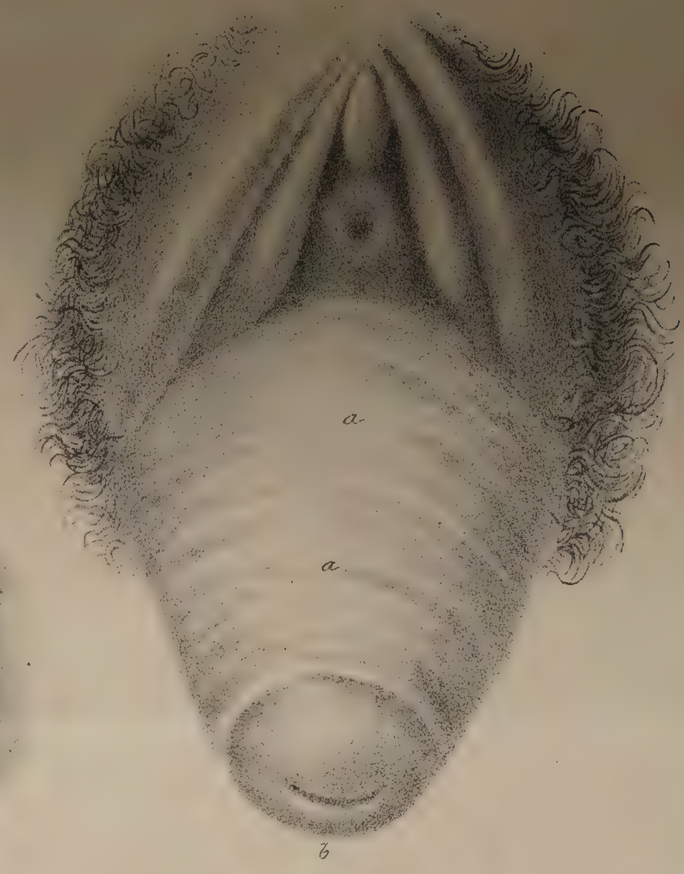

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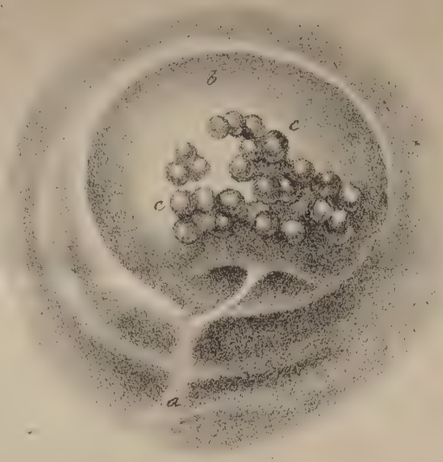

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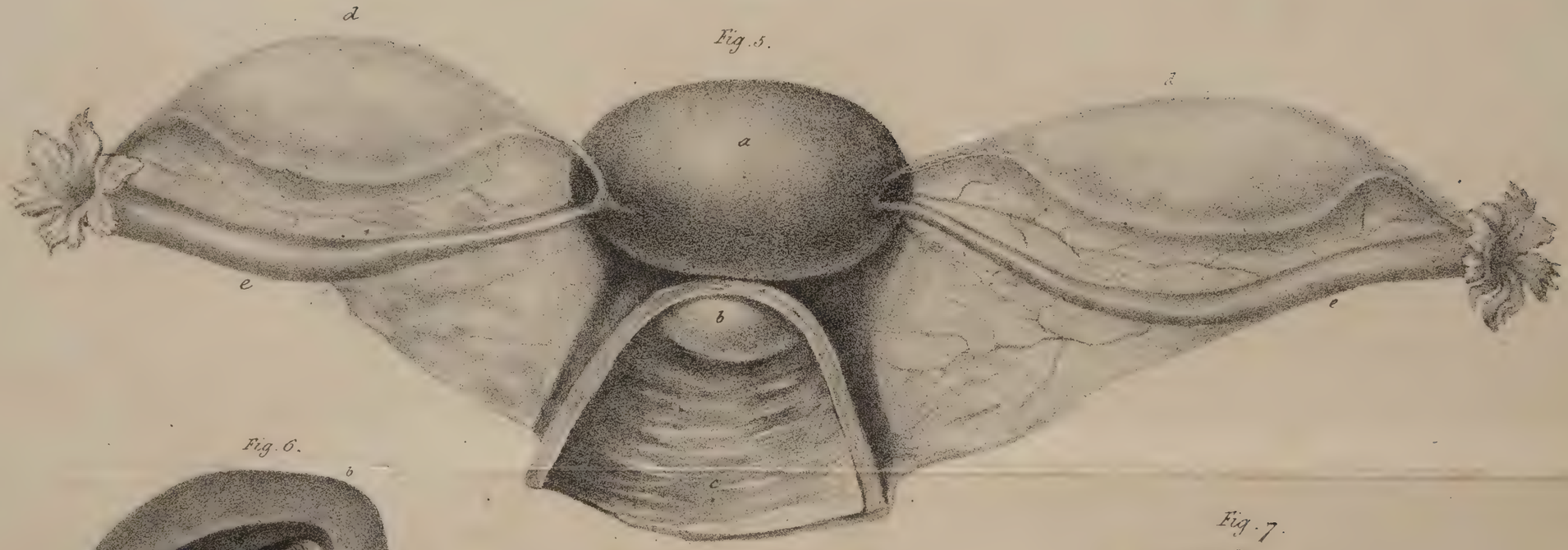
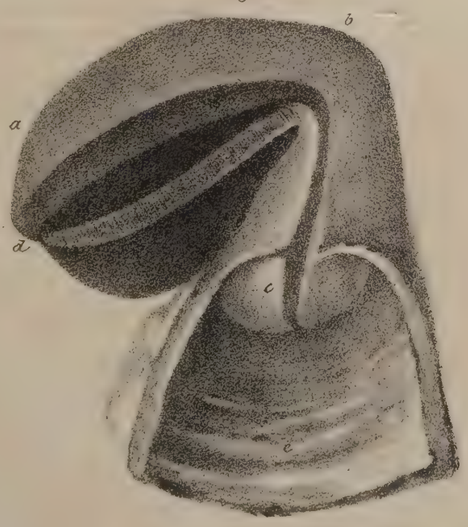


Fig. 6.



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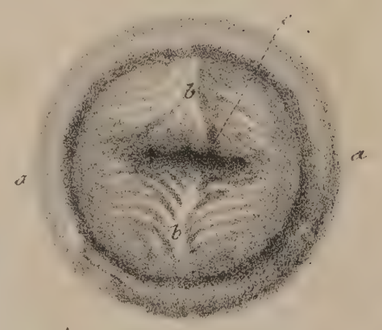

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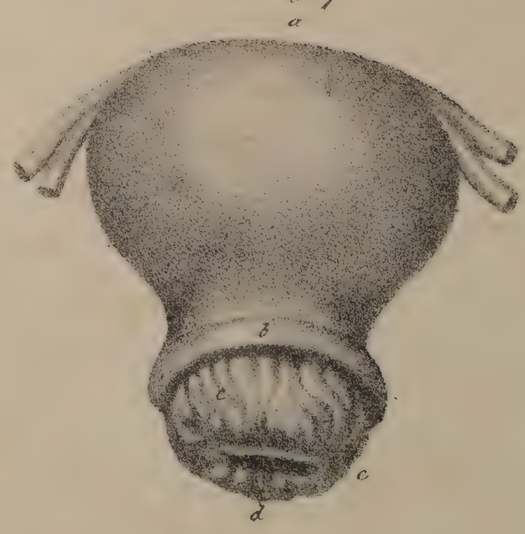

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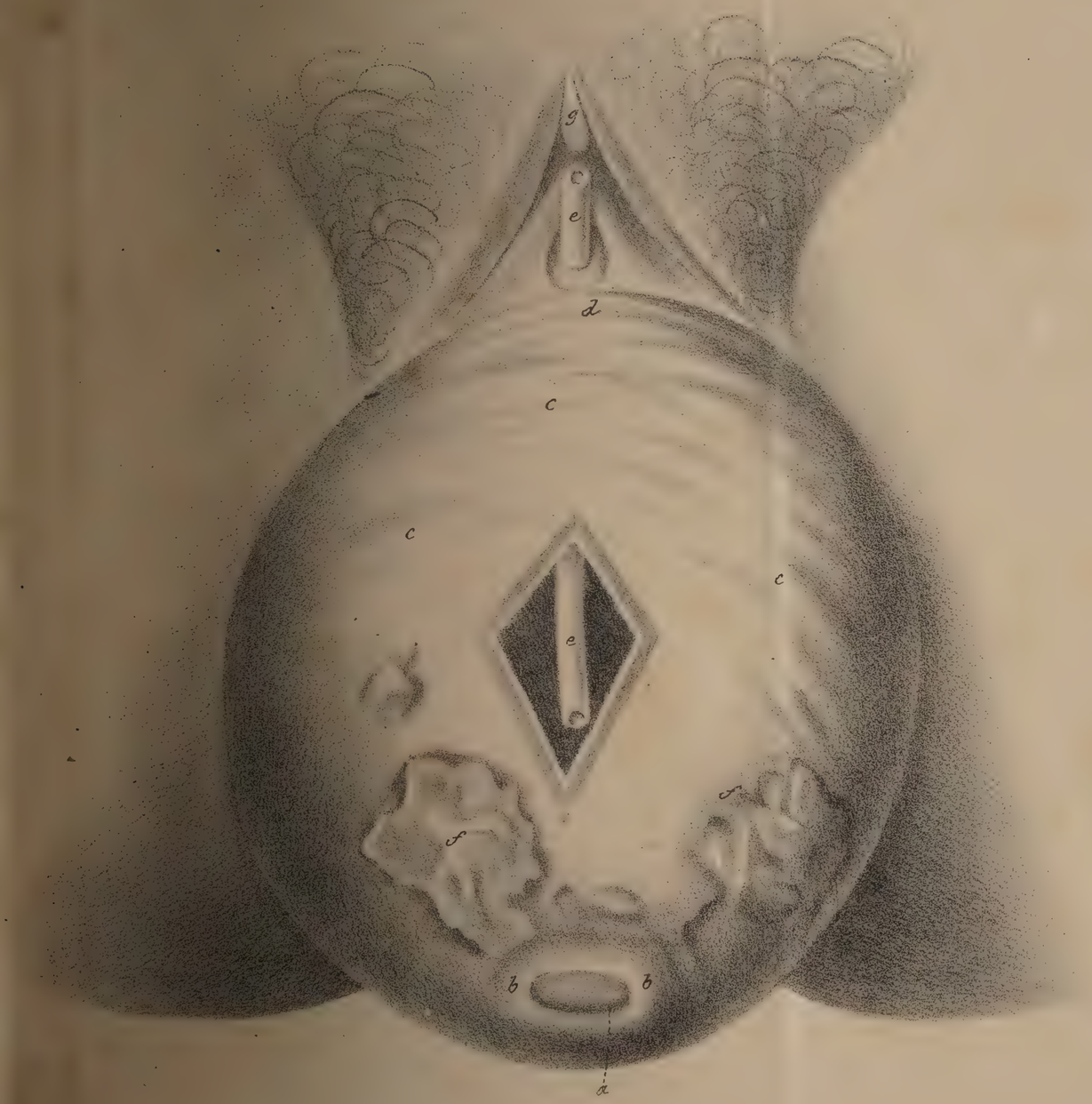

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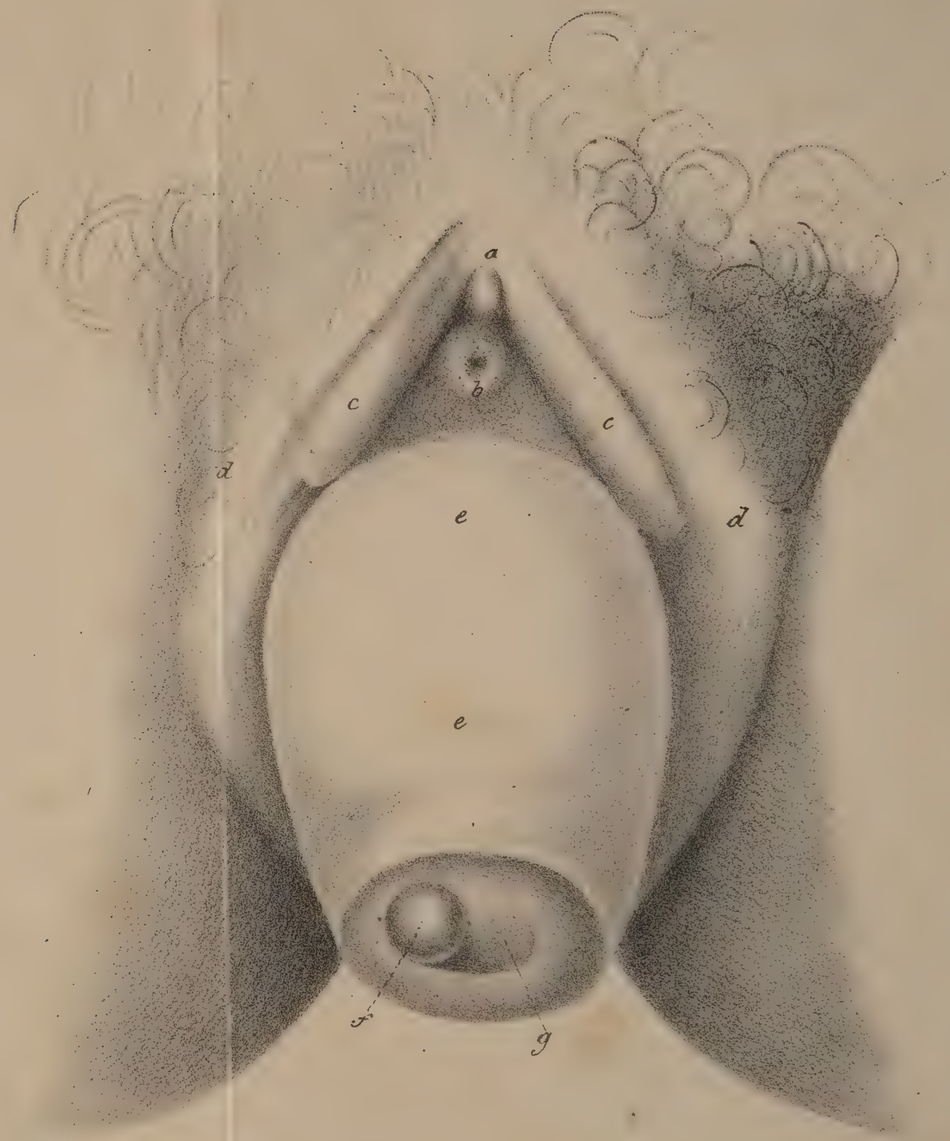

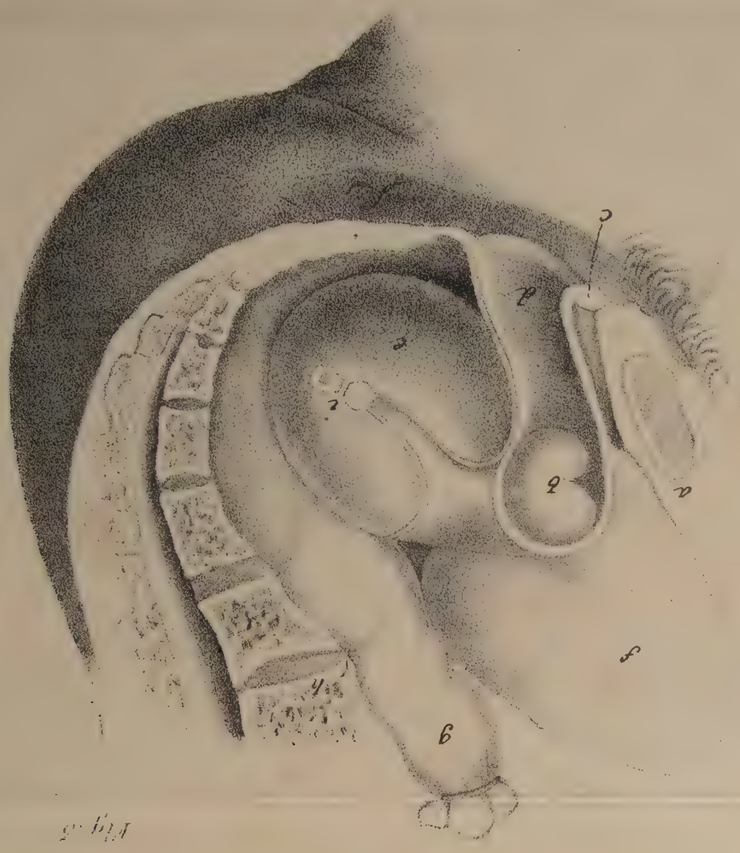
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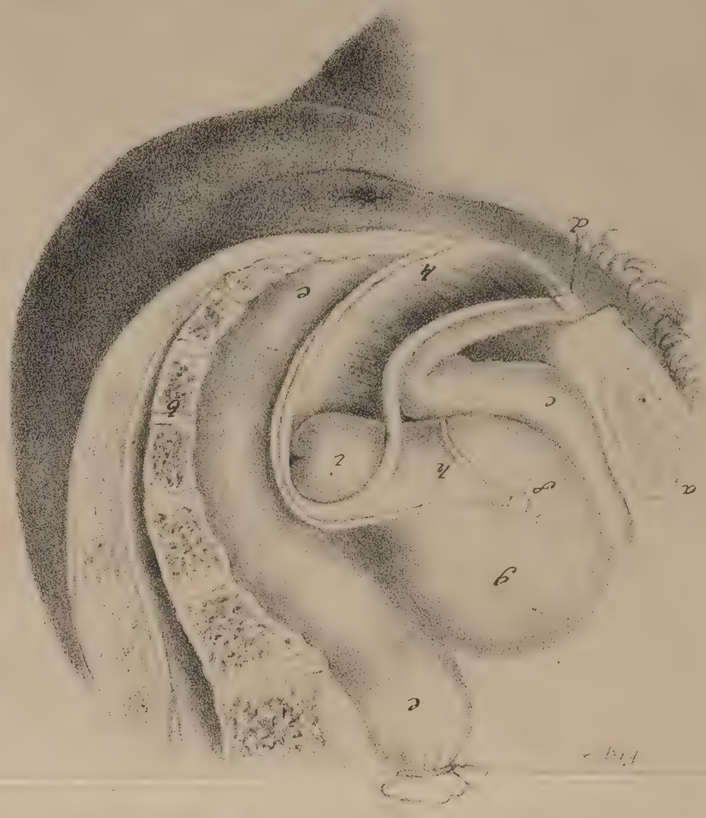
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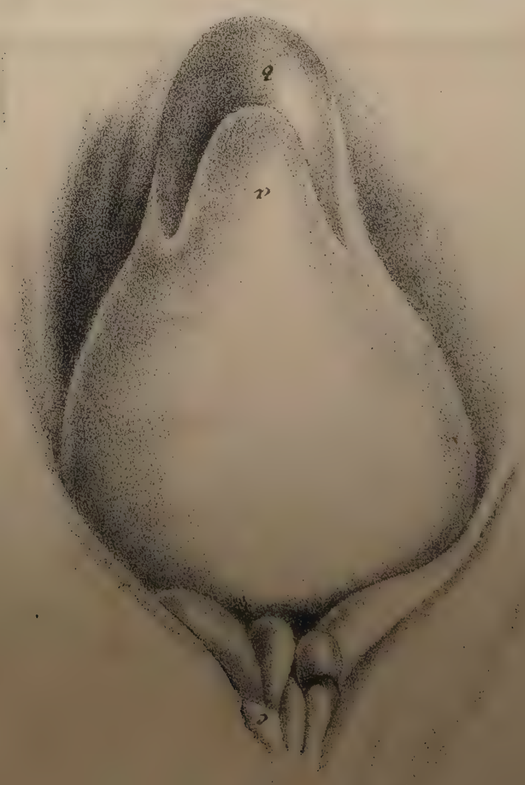
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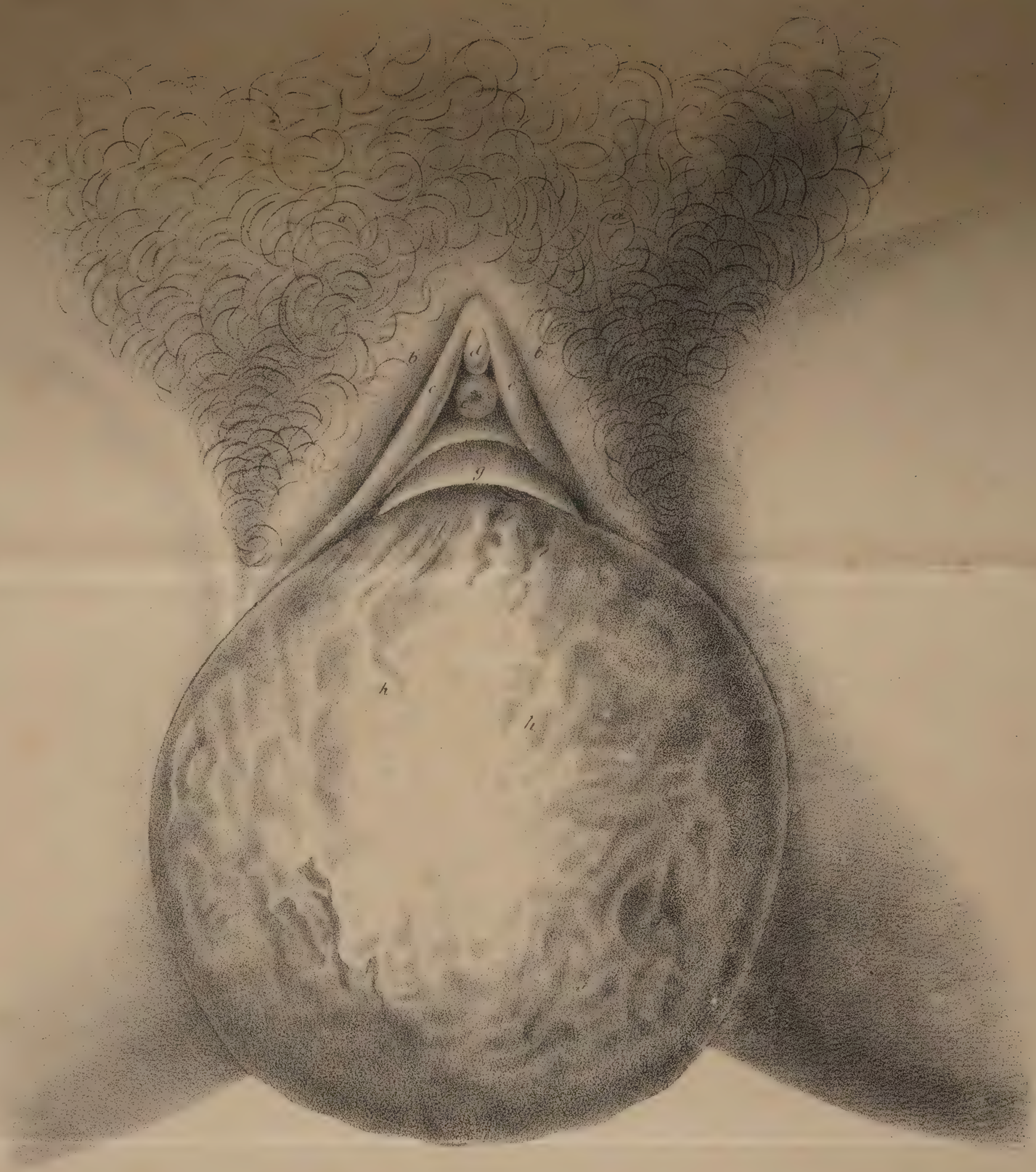

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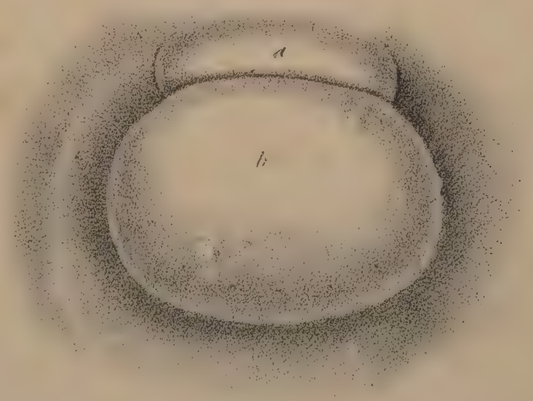

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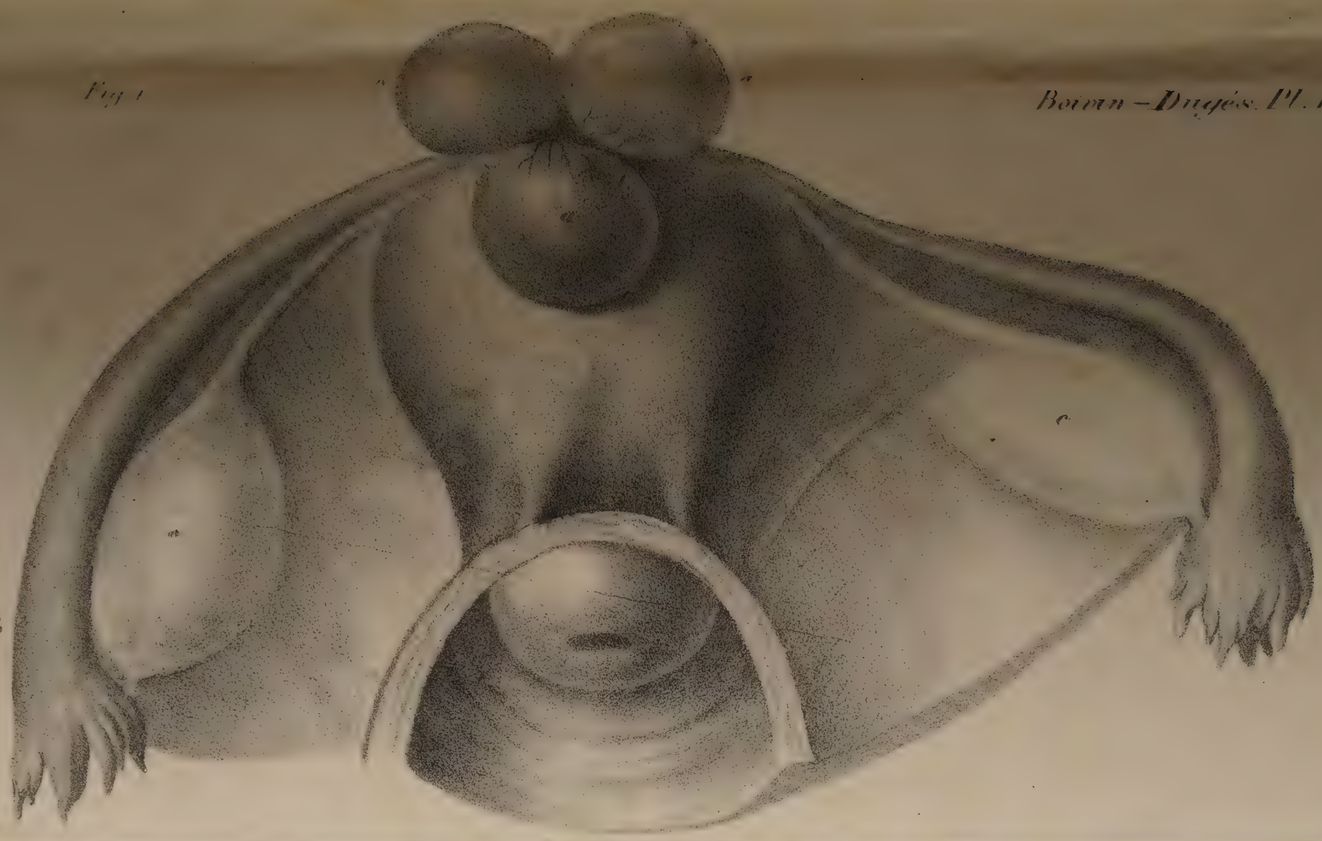

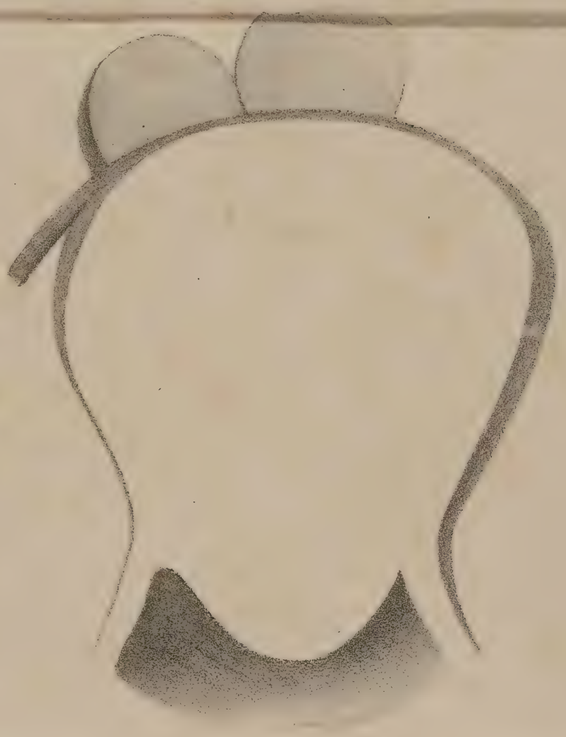

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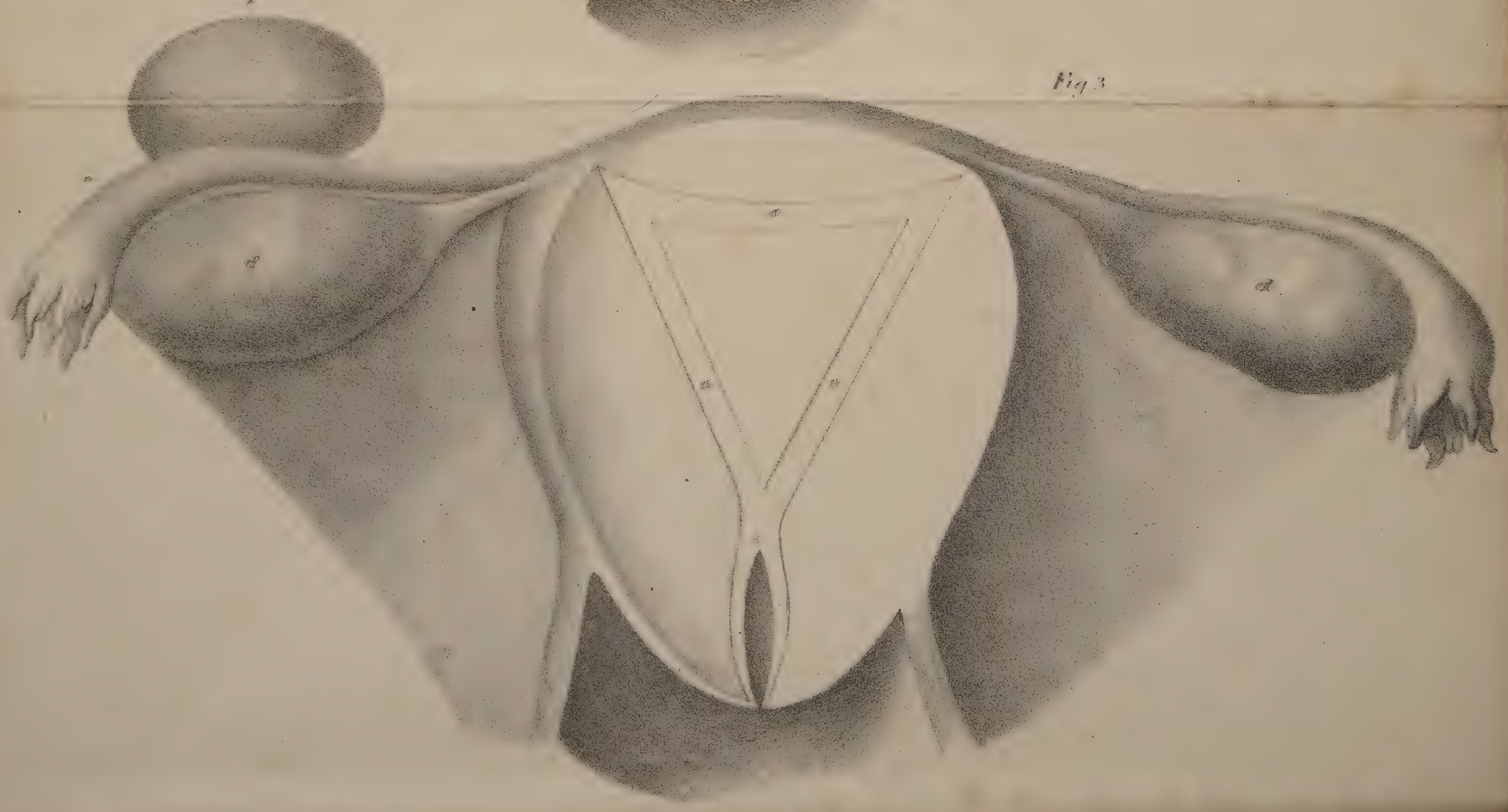

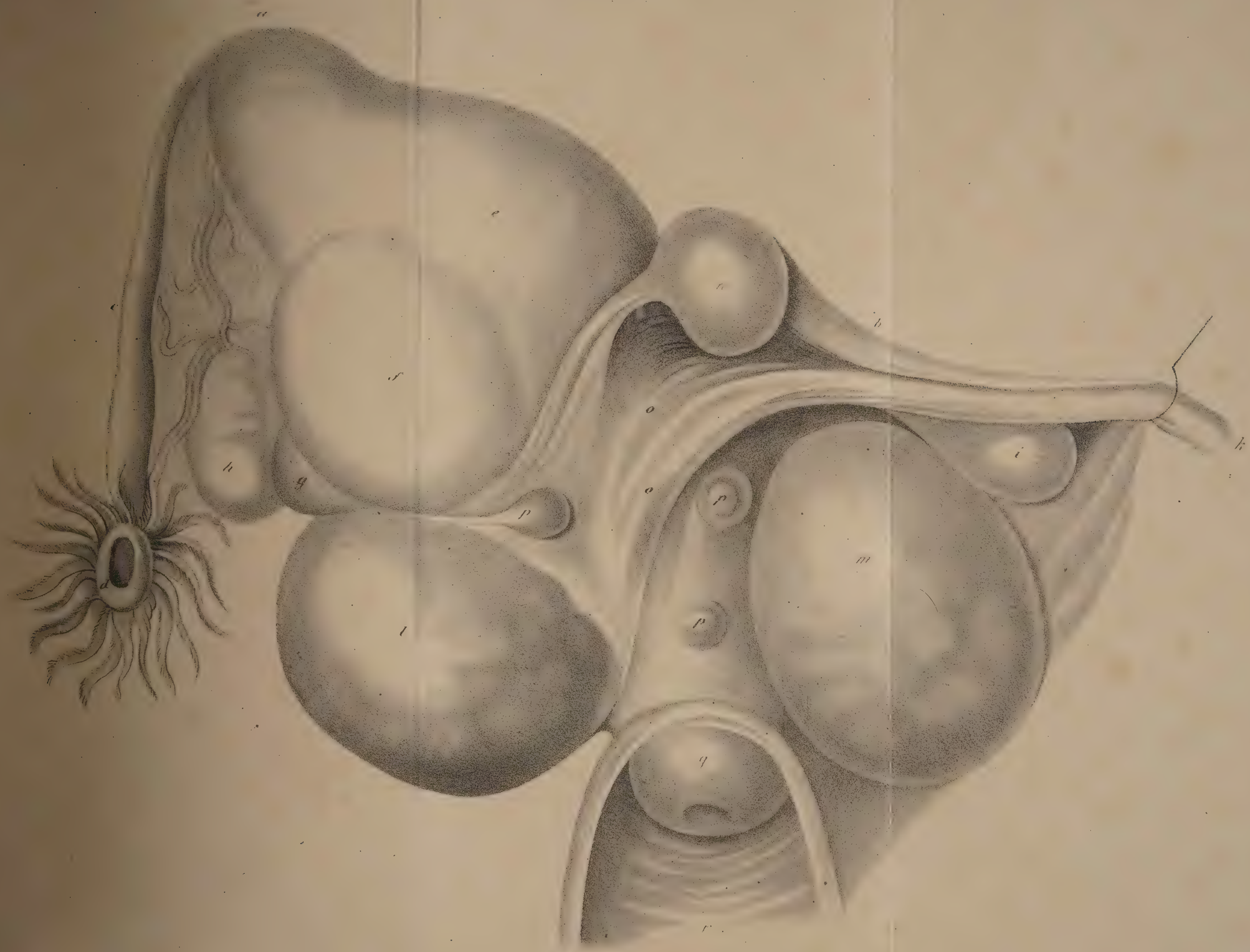
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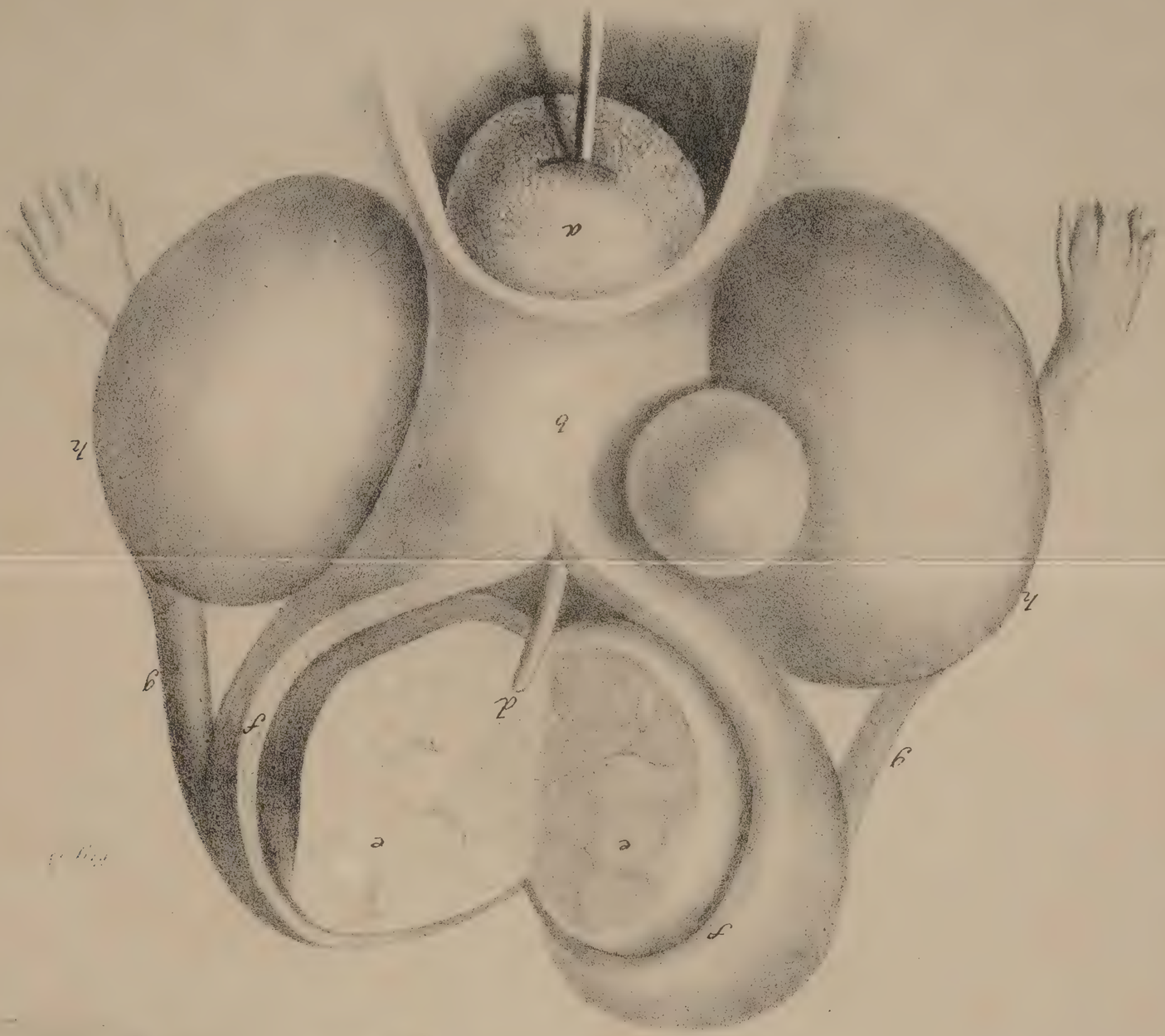
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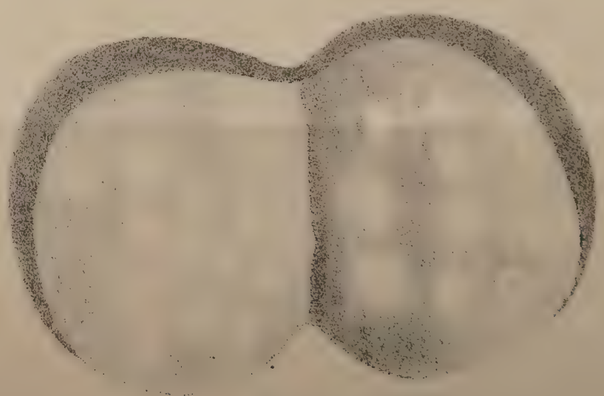

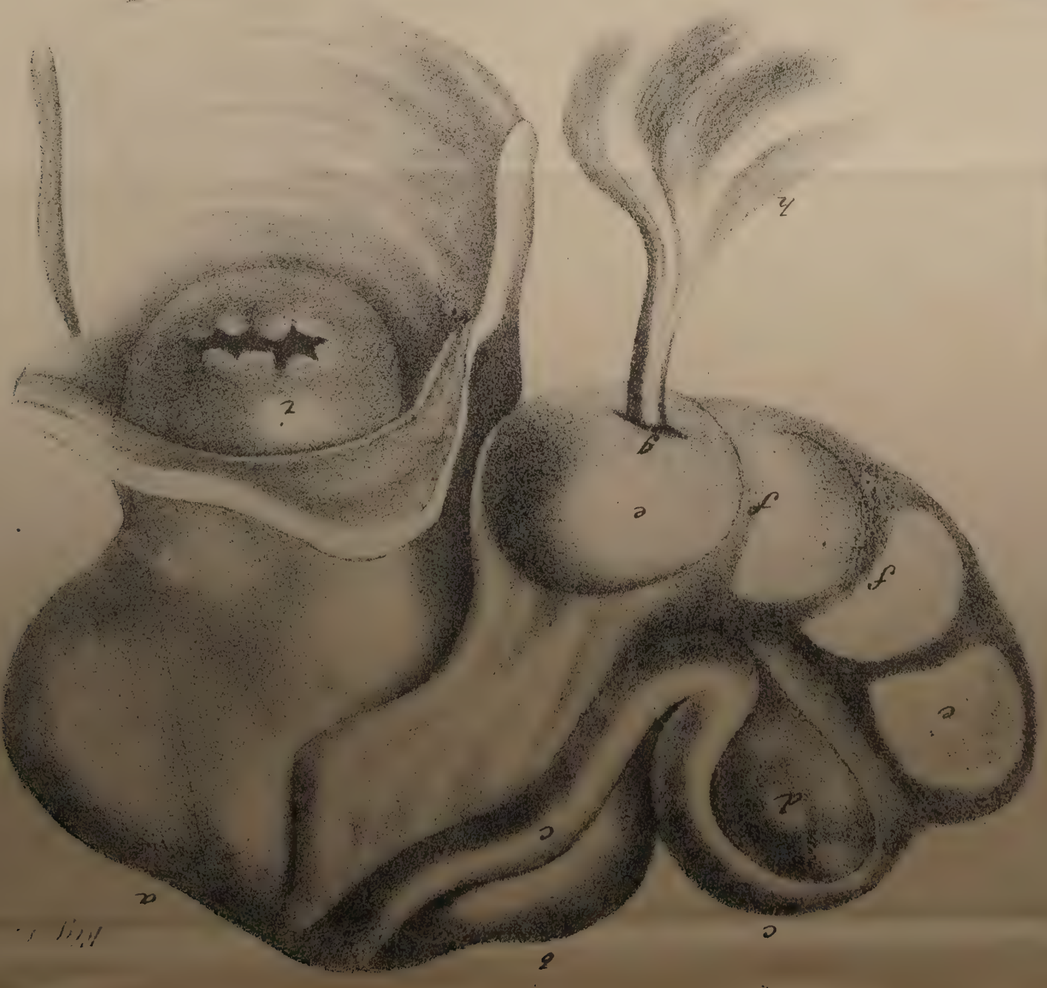
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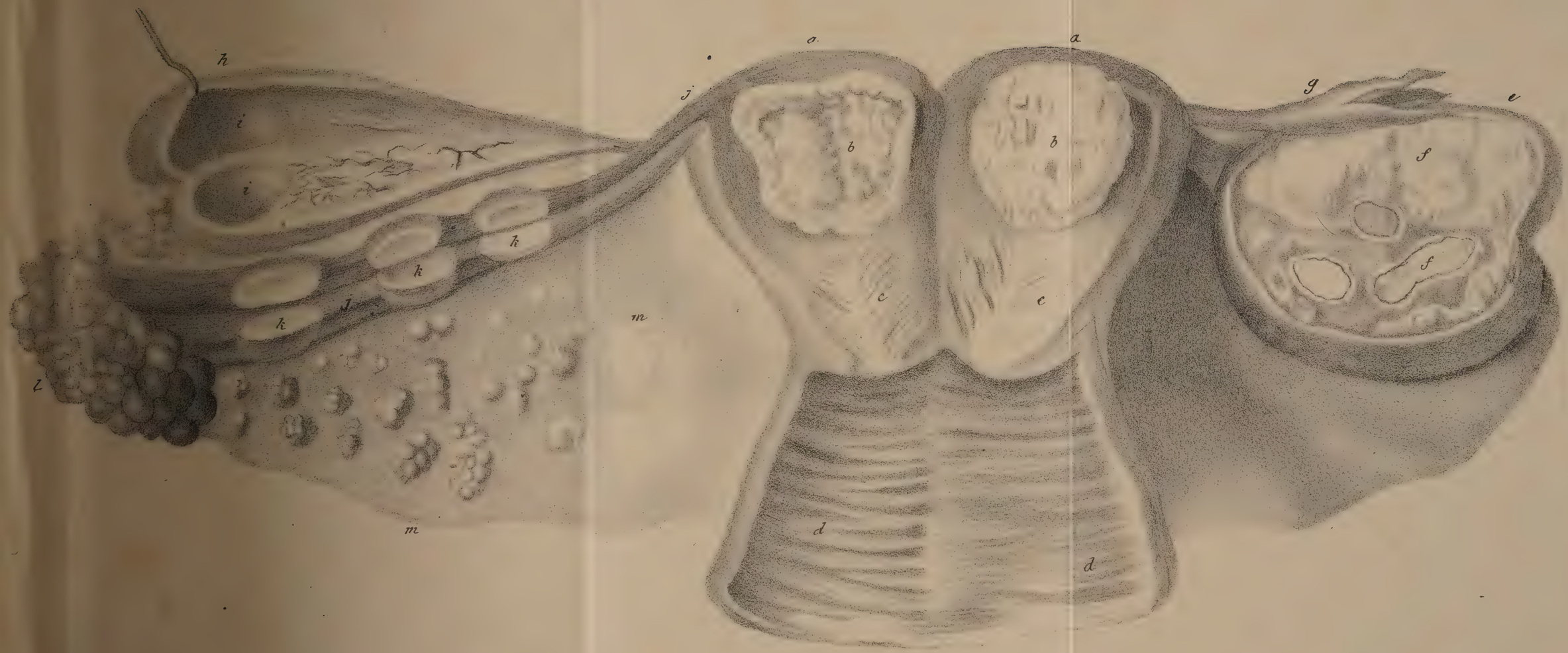
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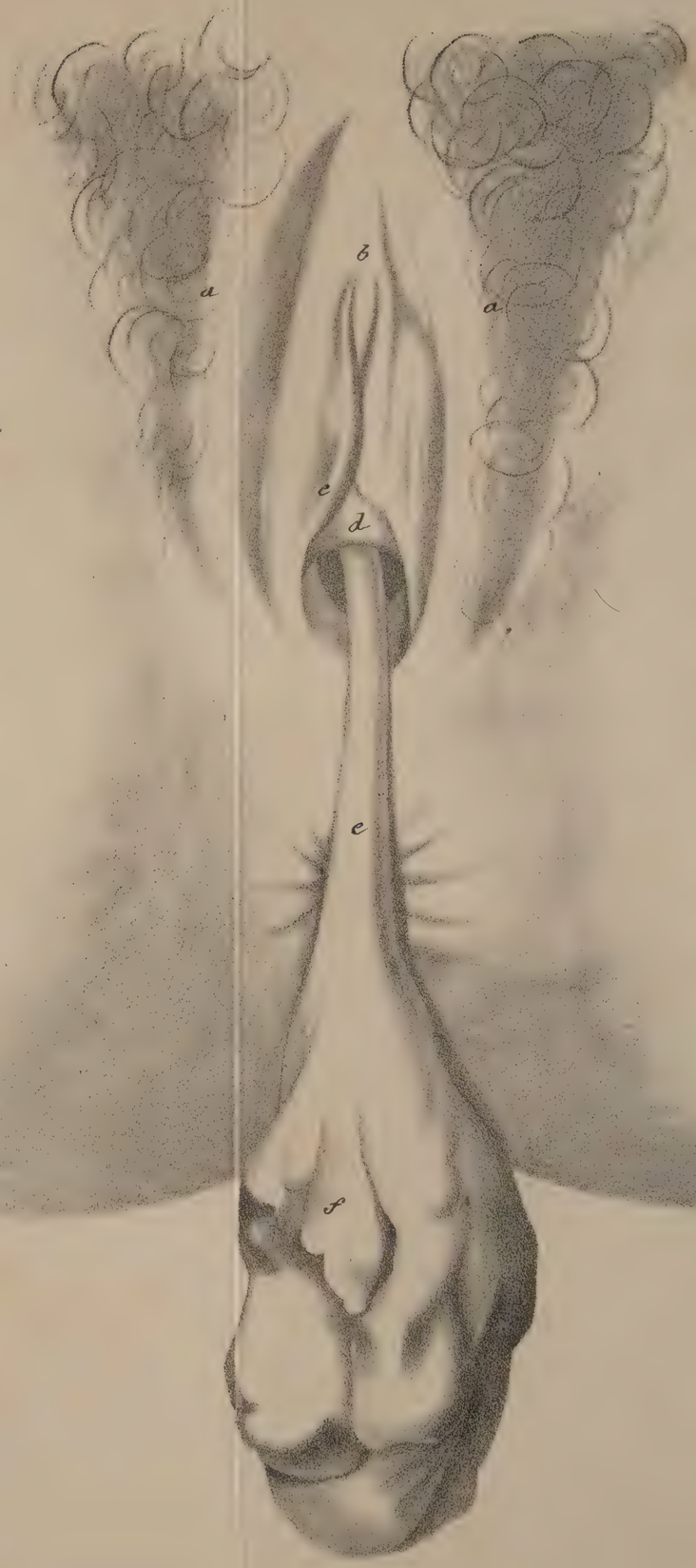

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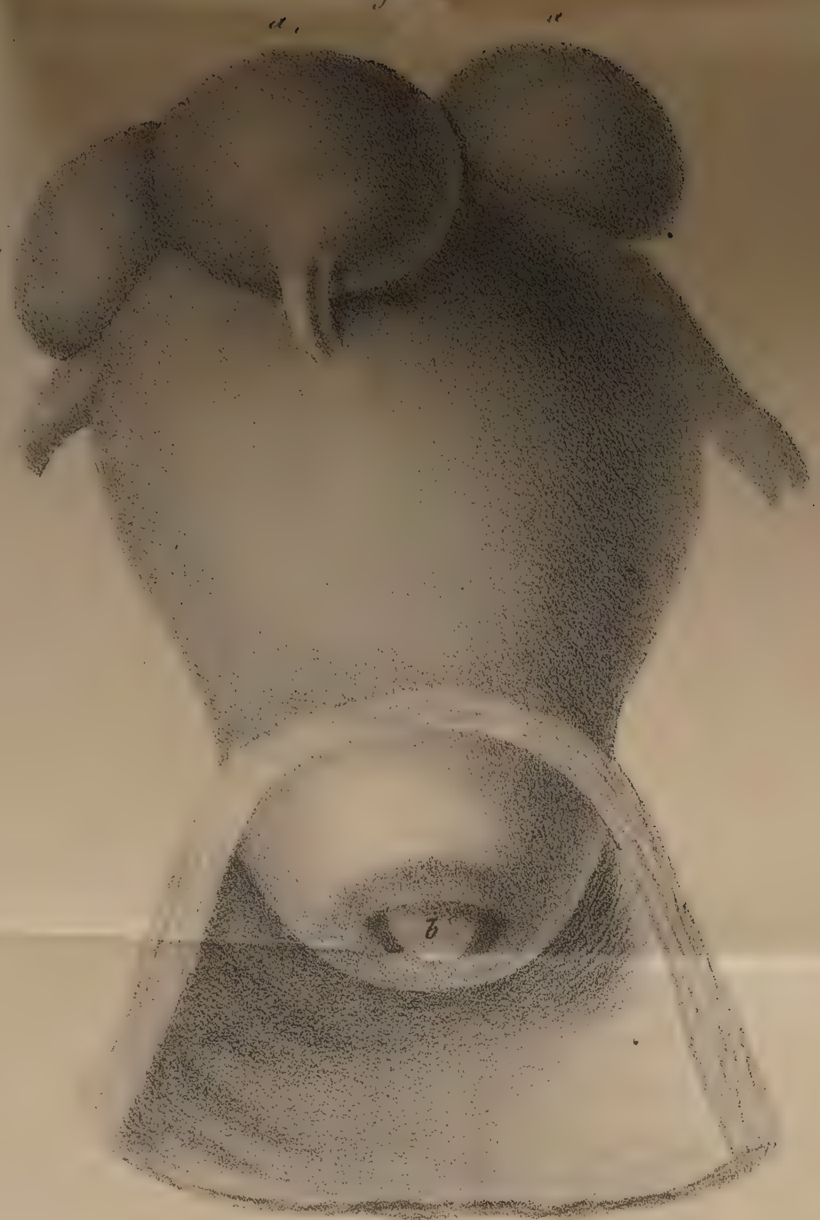
Fig.



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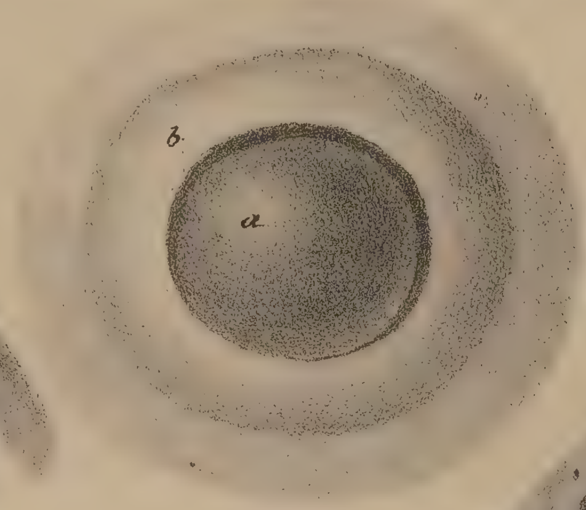

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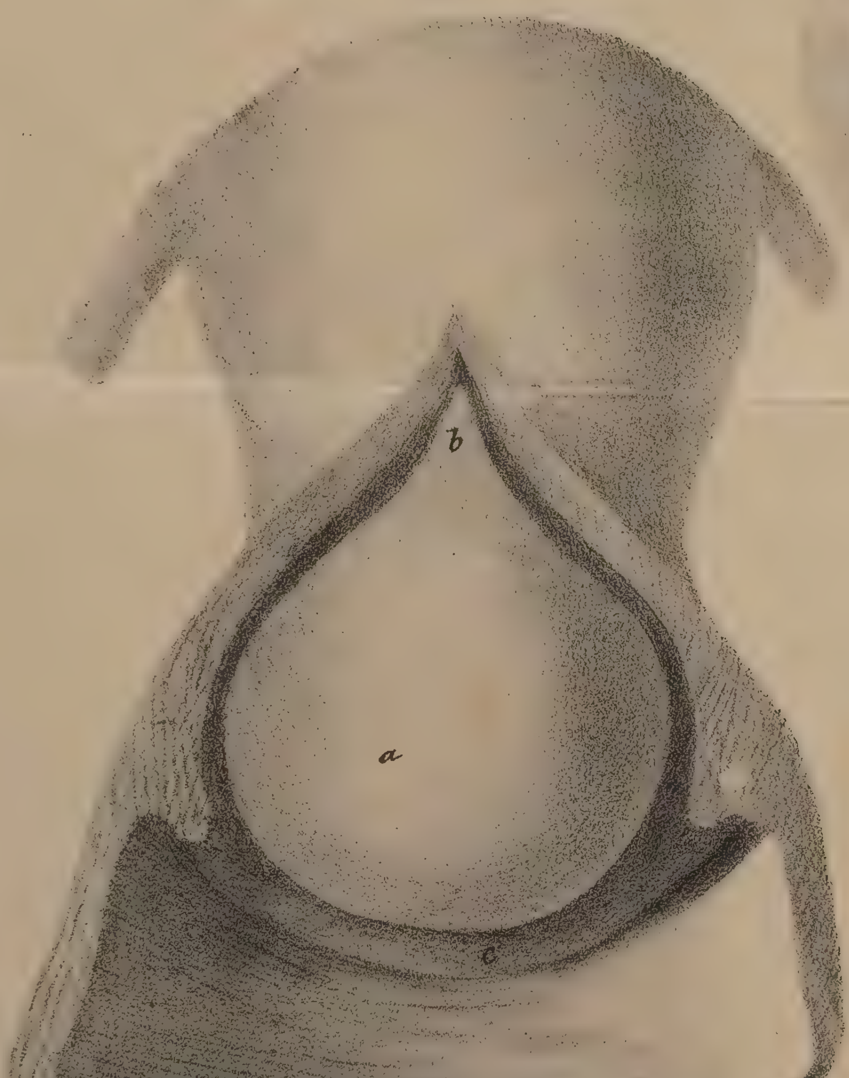

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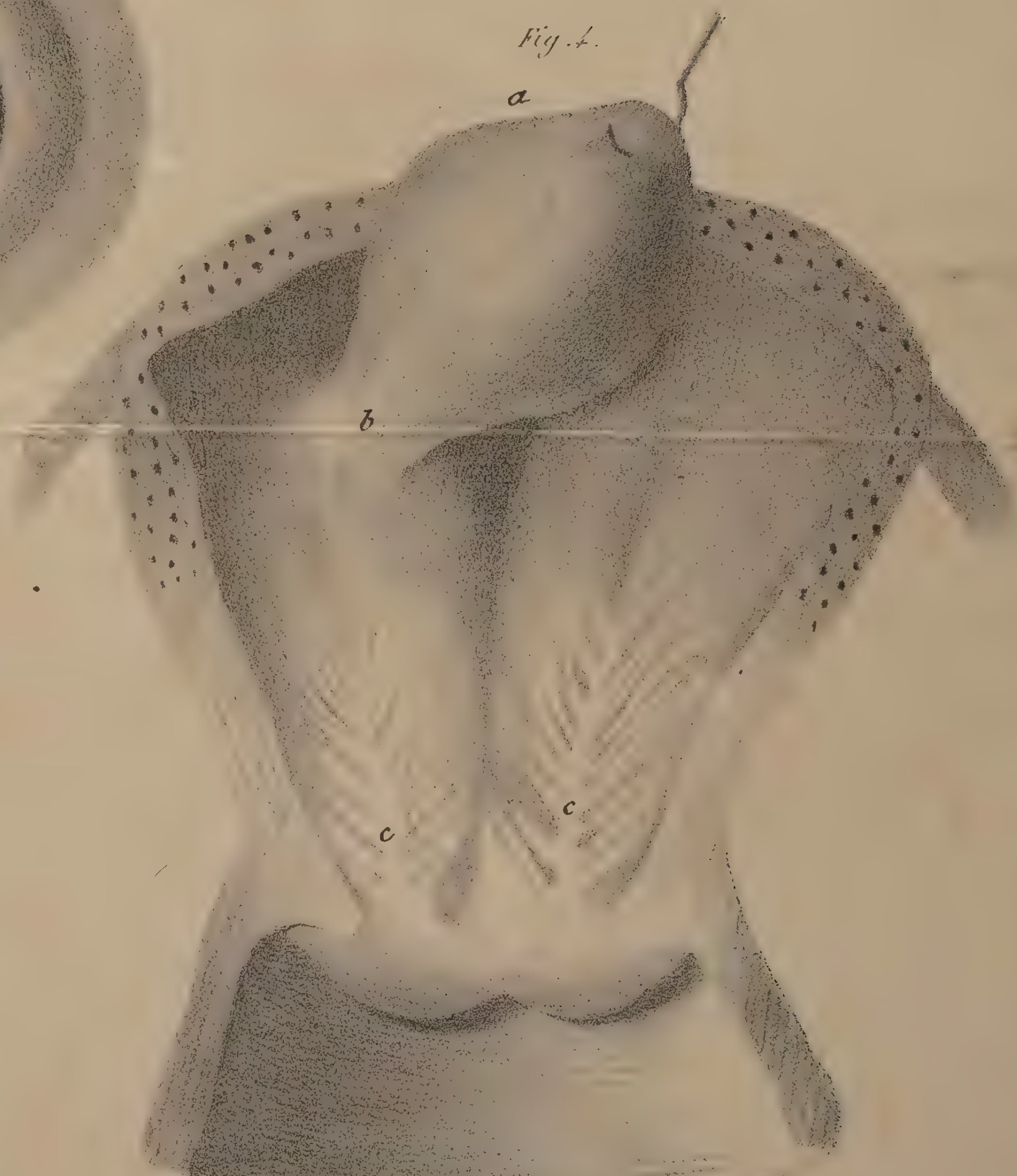

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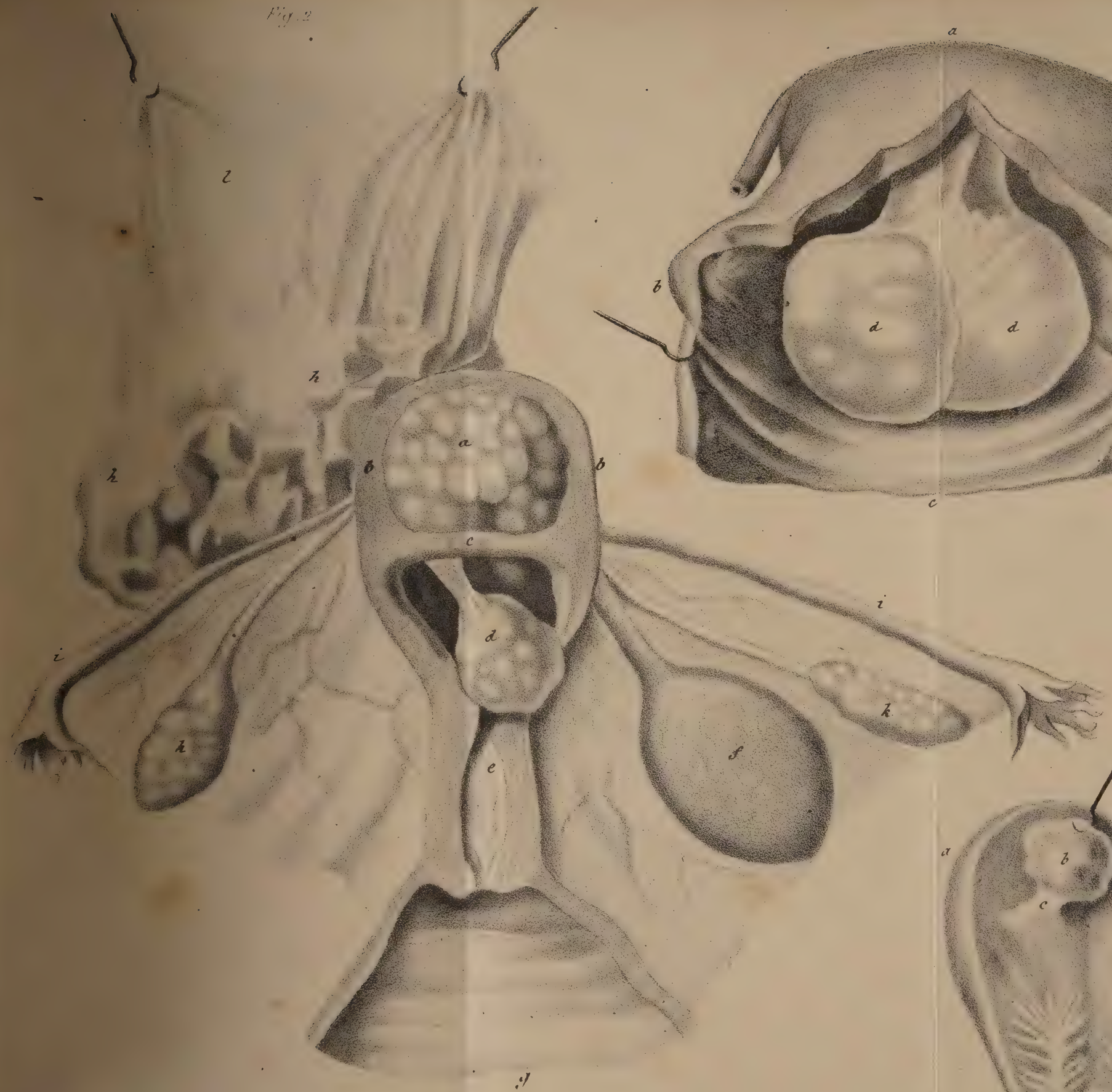

Fig. 3

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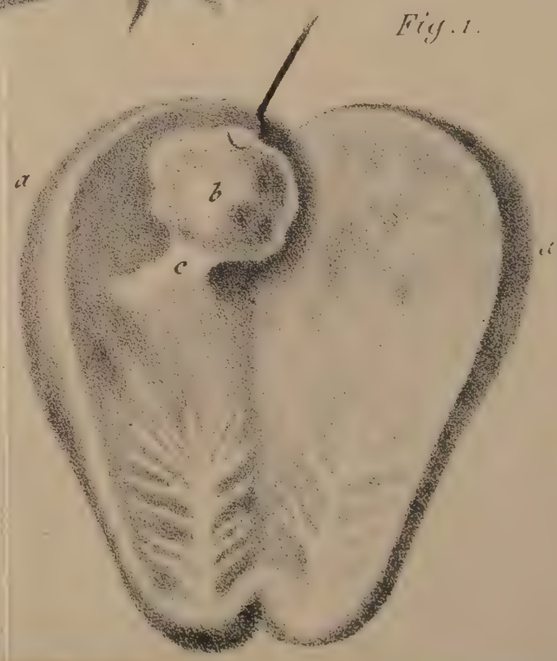

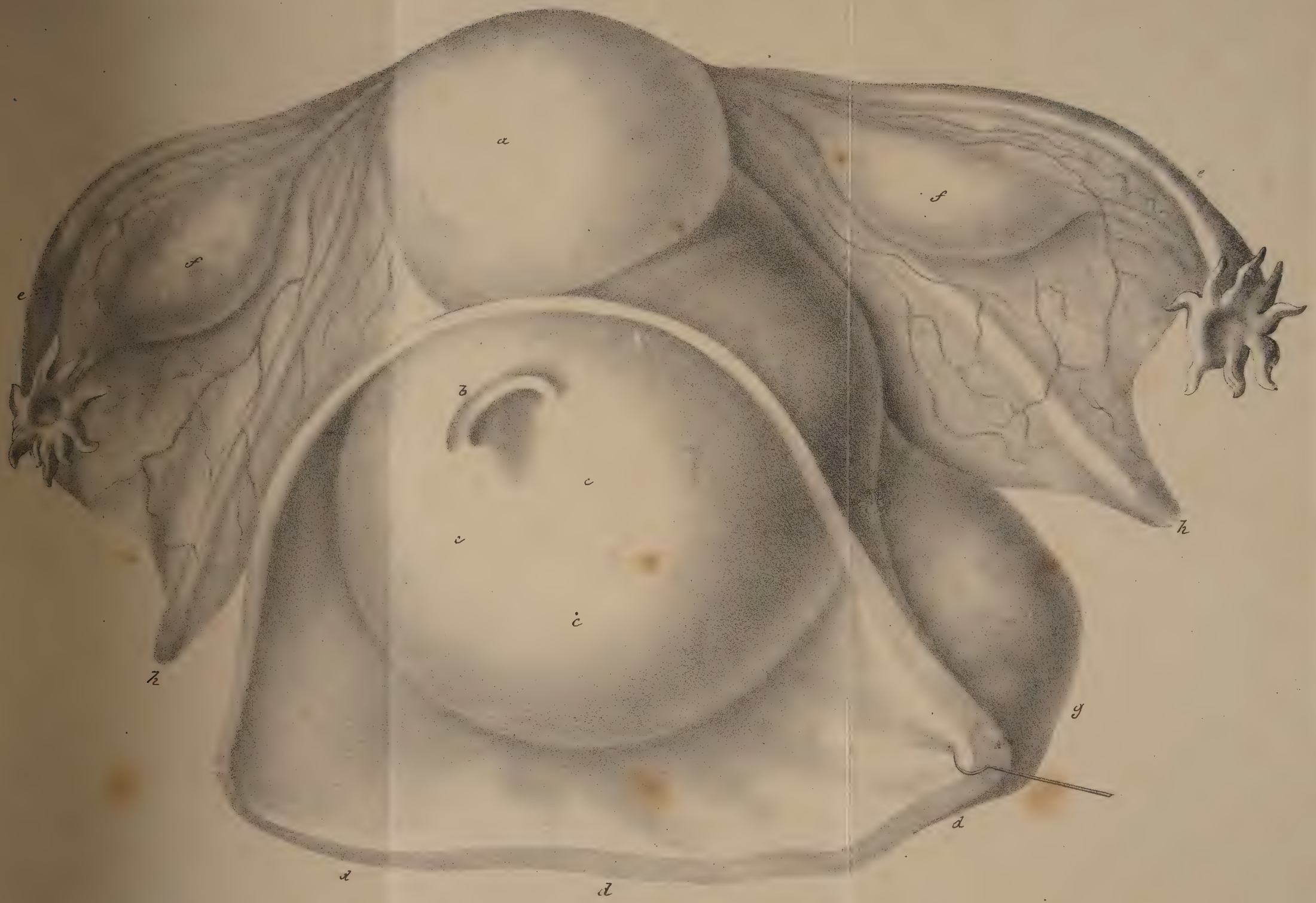
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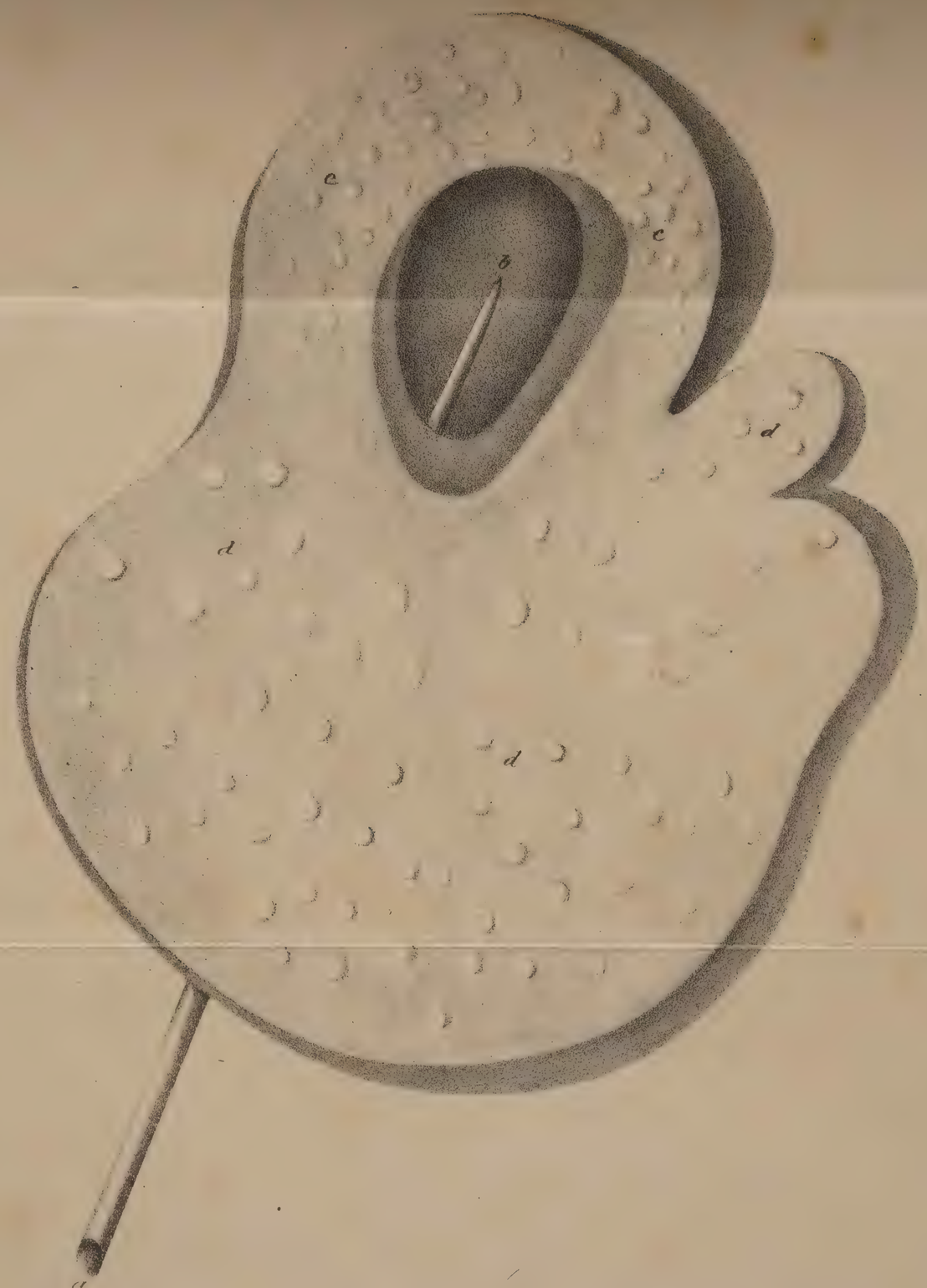
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Fig. 1.

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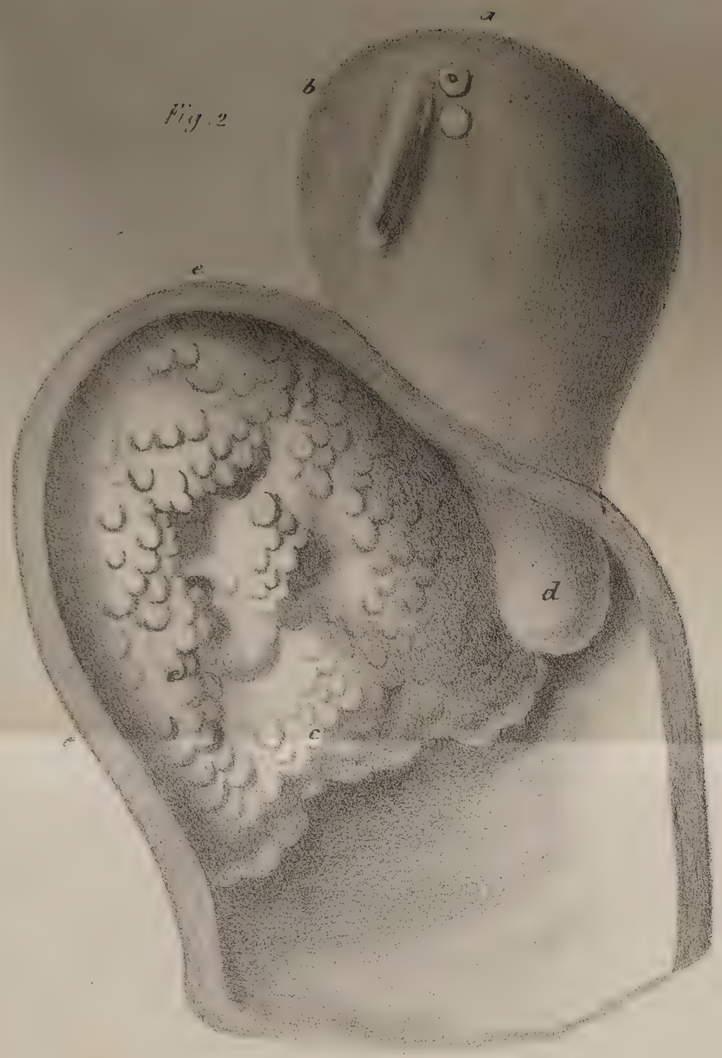

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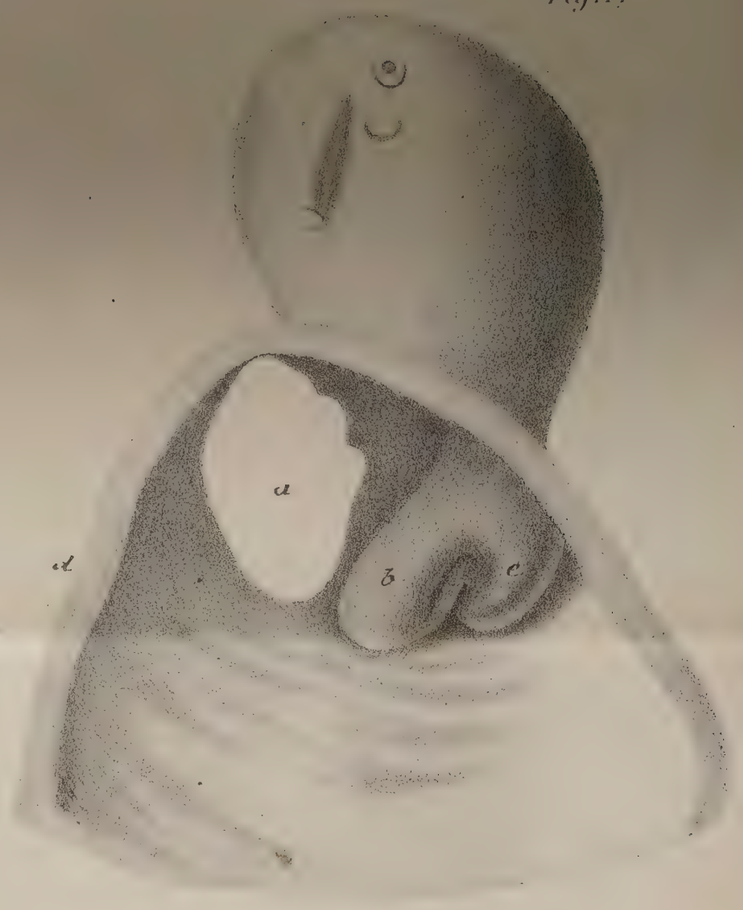

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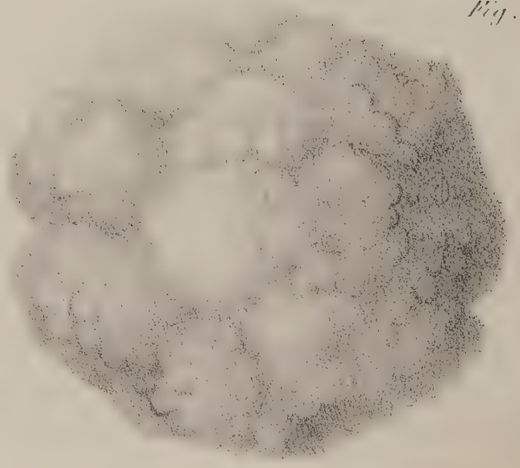

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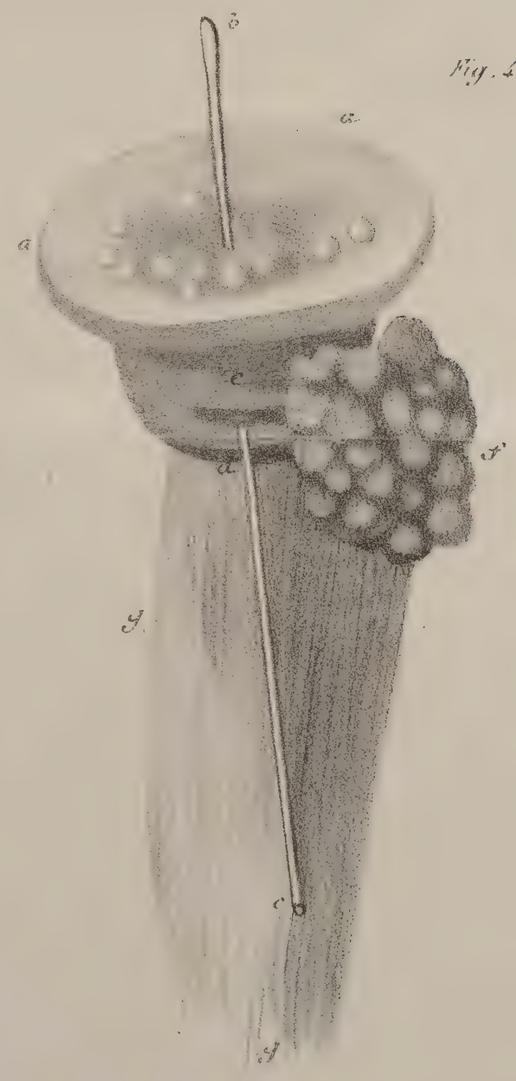

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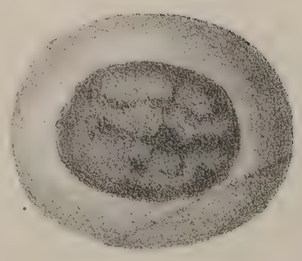

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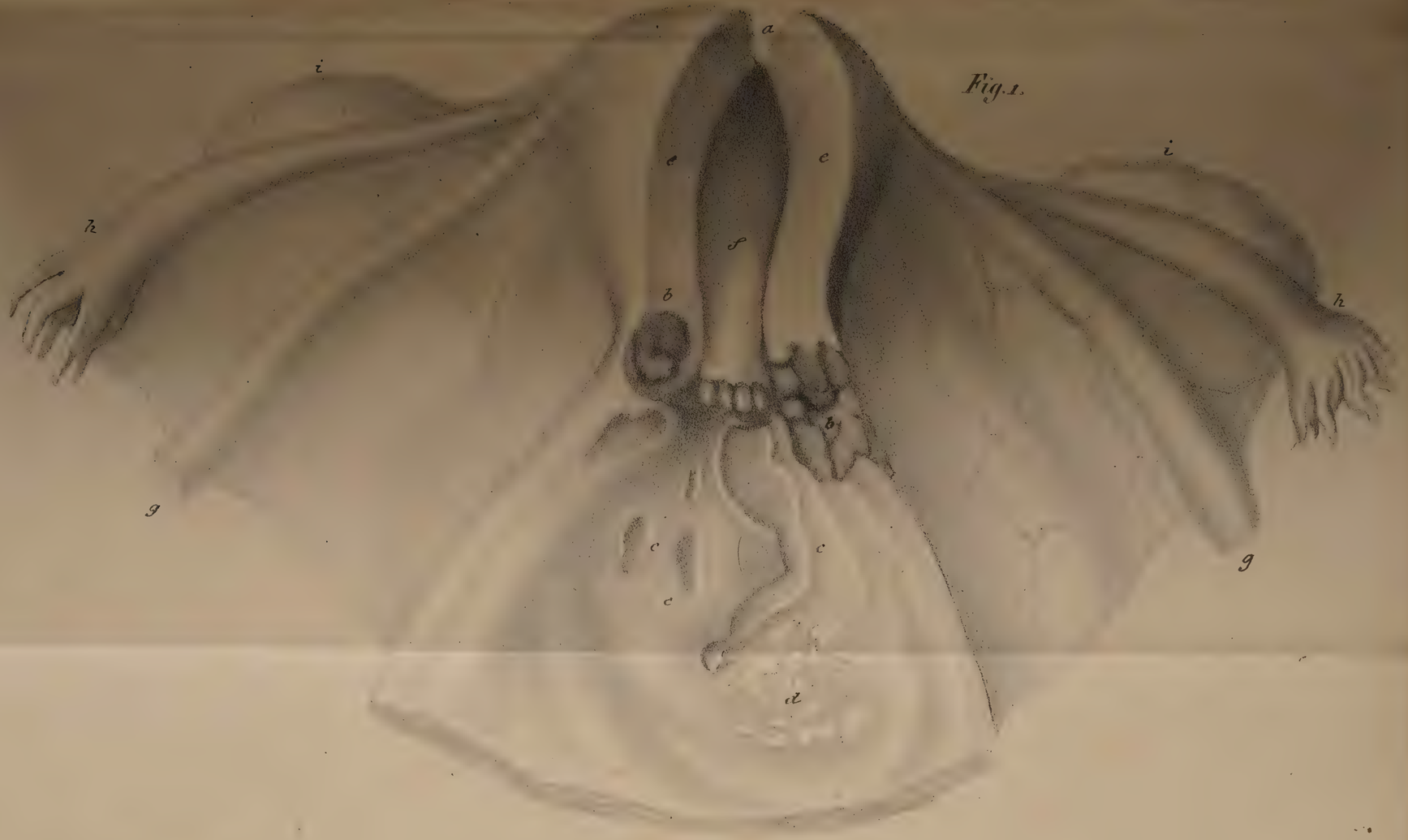

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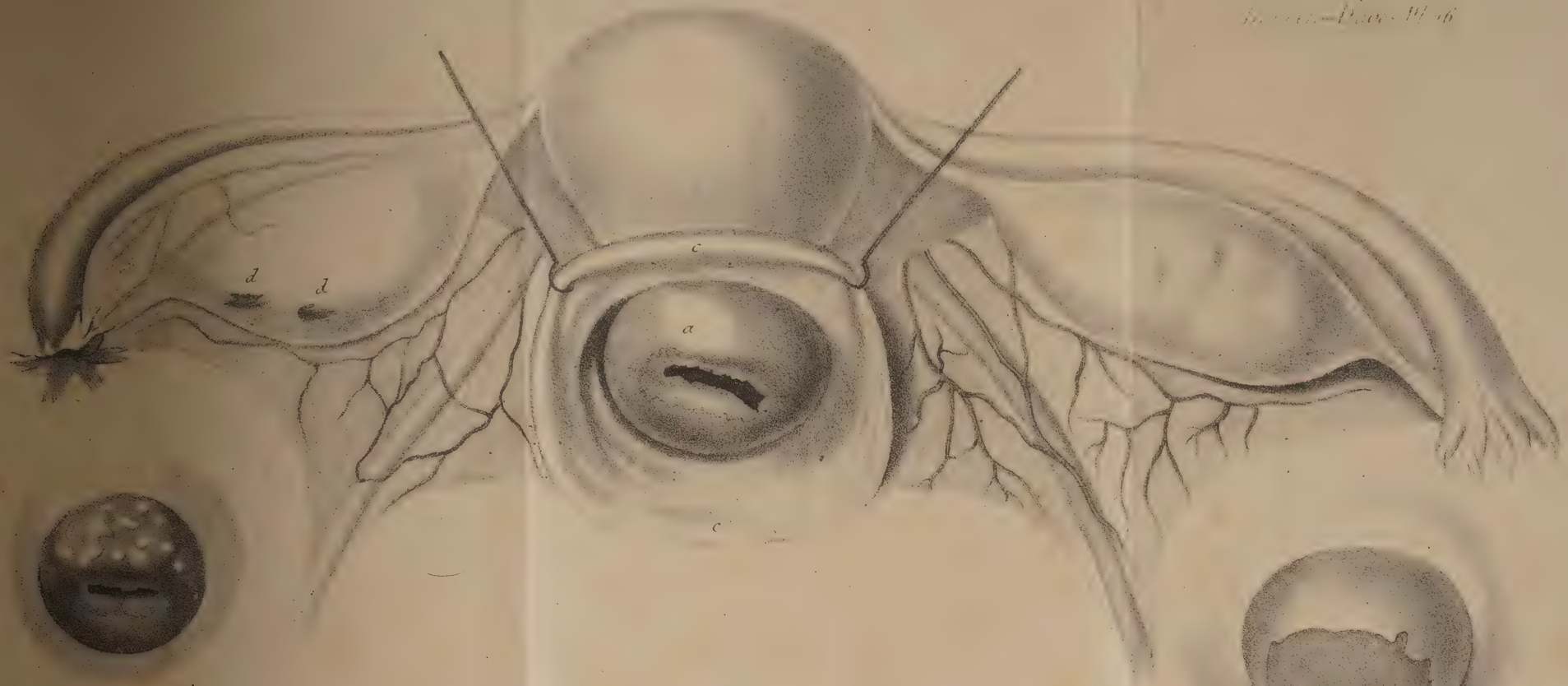

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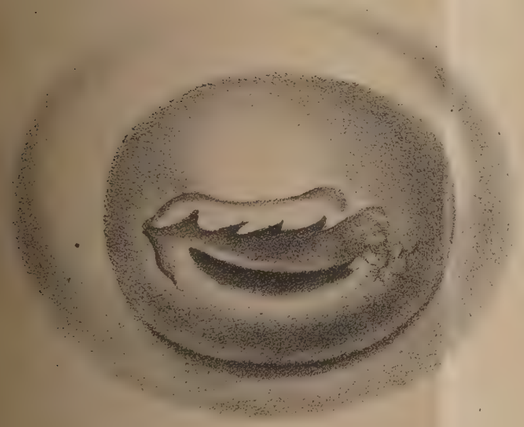

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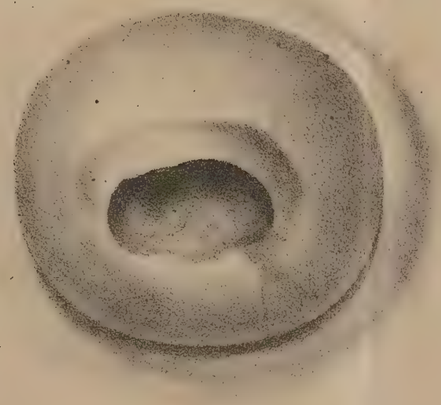

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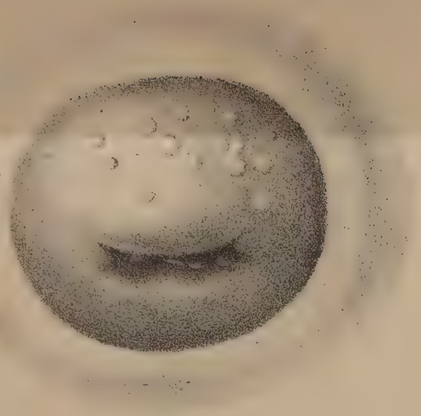

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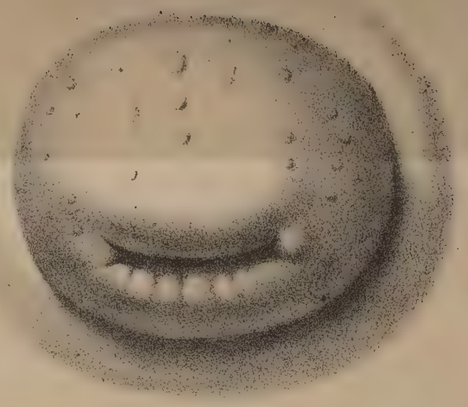

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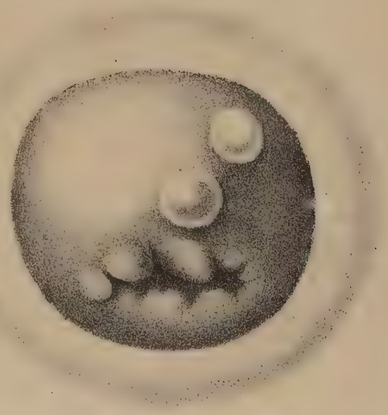

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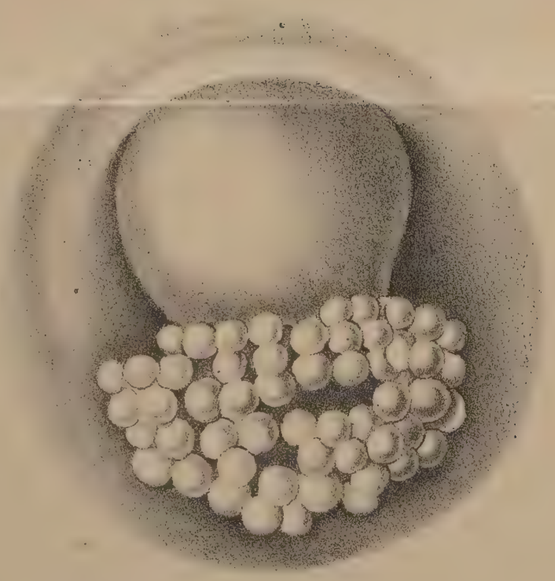

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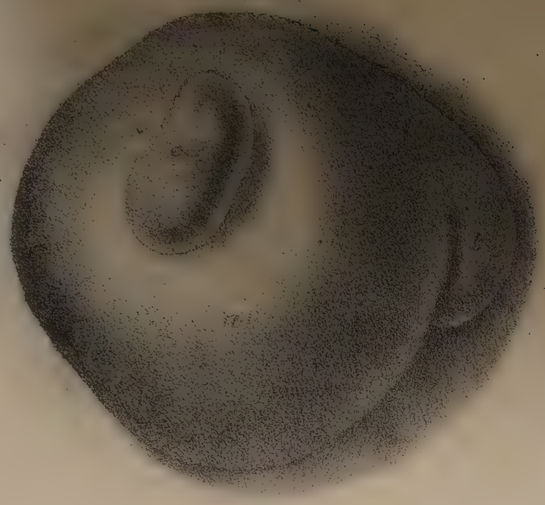

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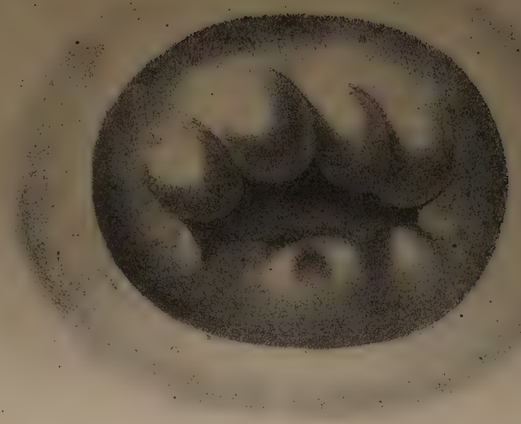

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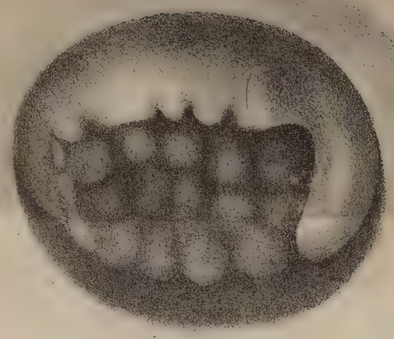

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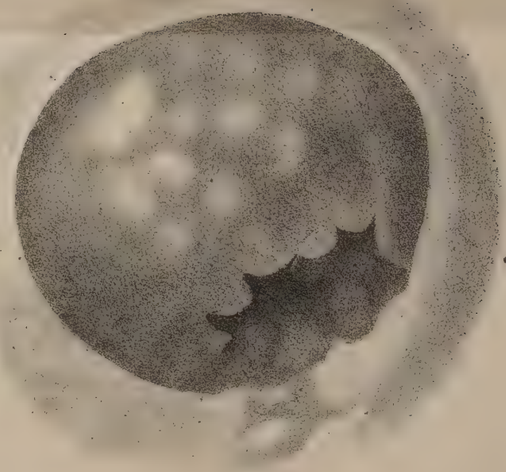

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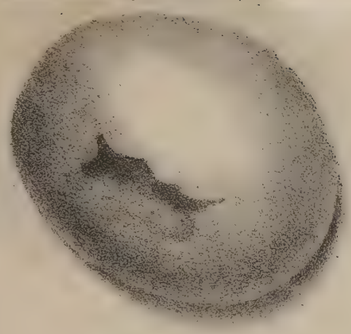

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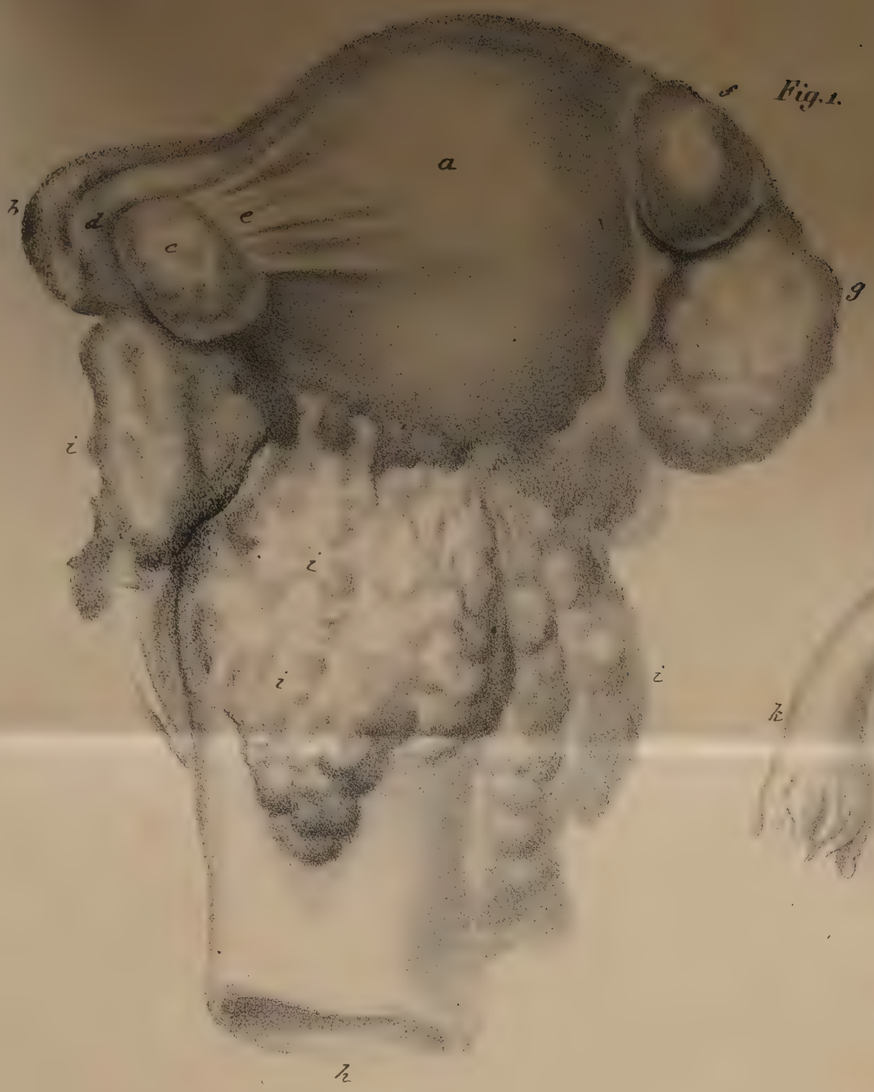

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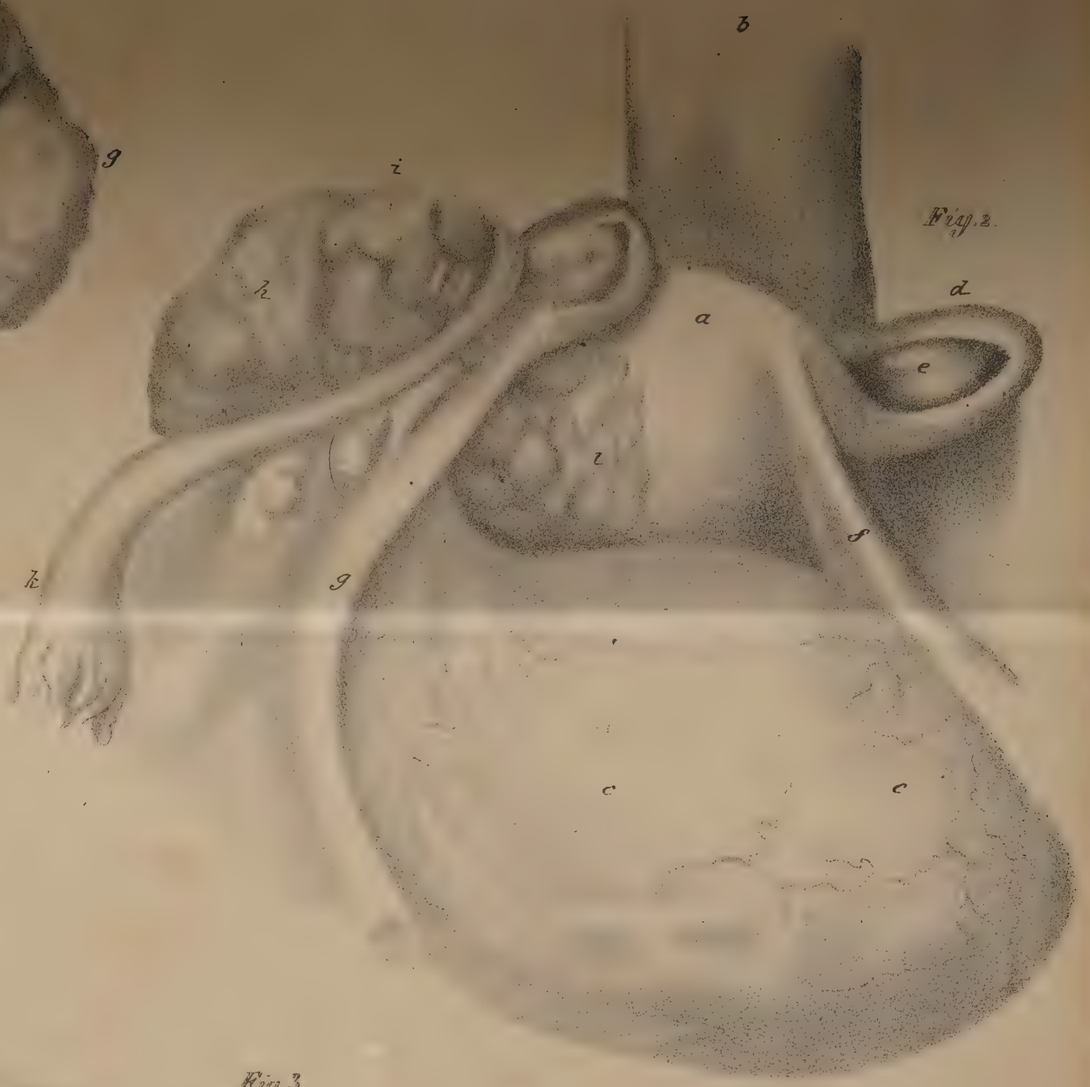

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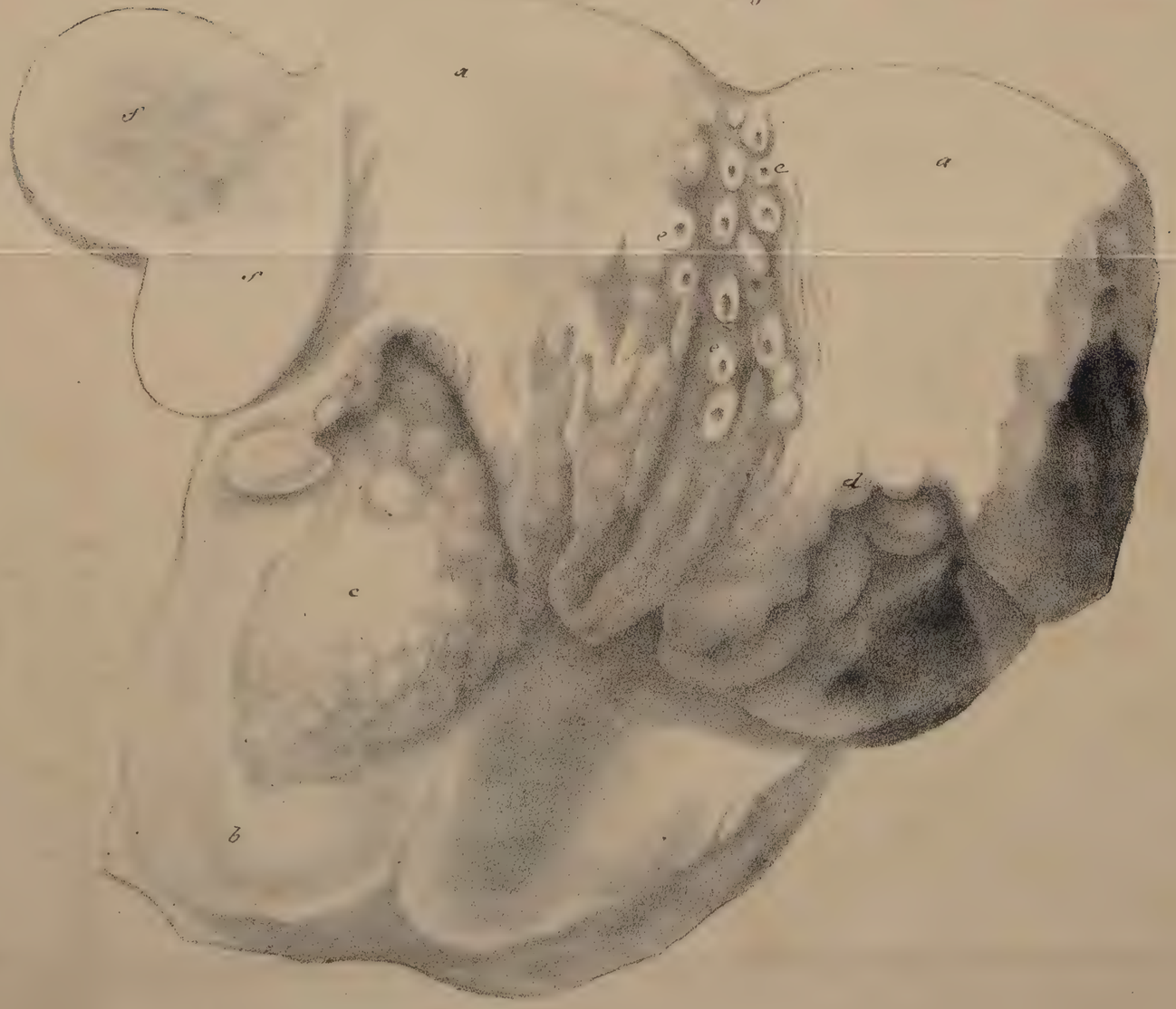

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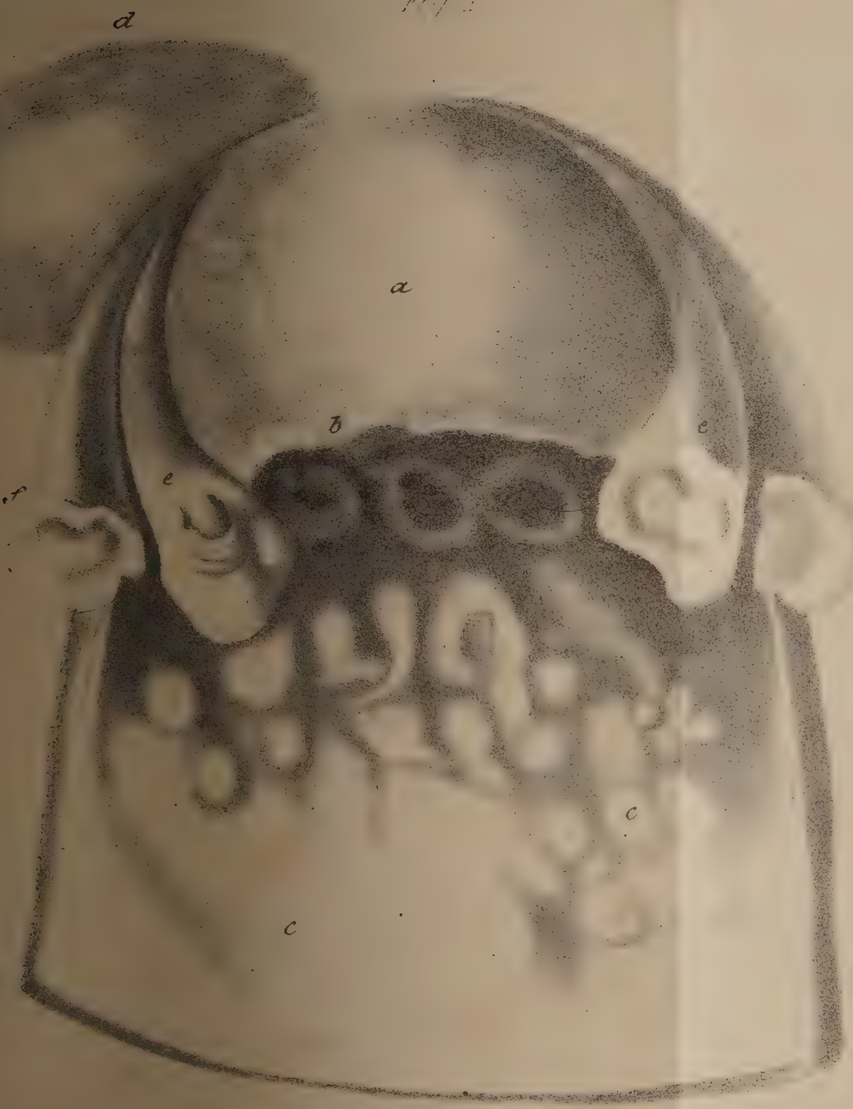

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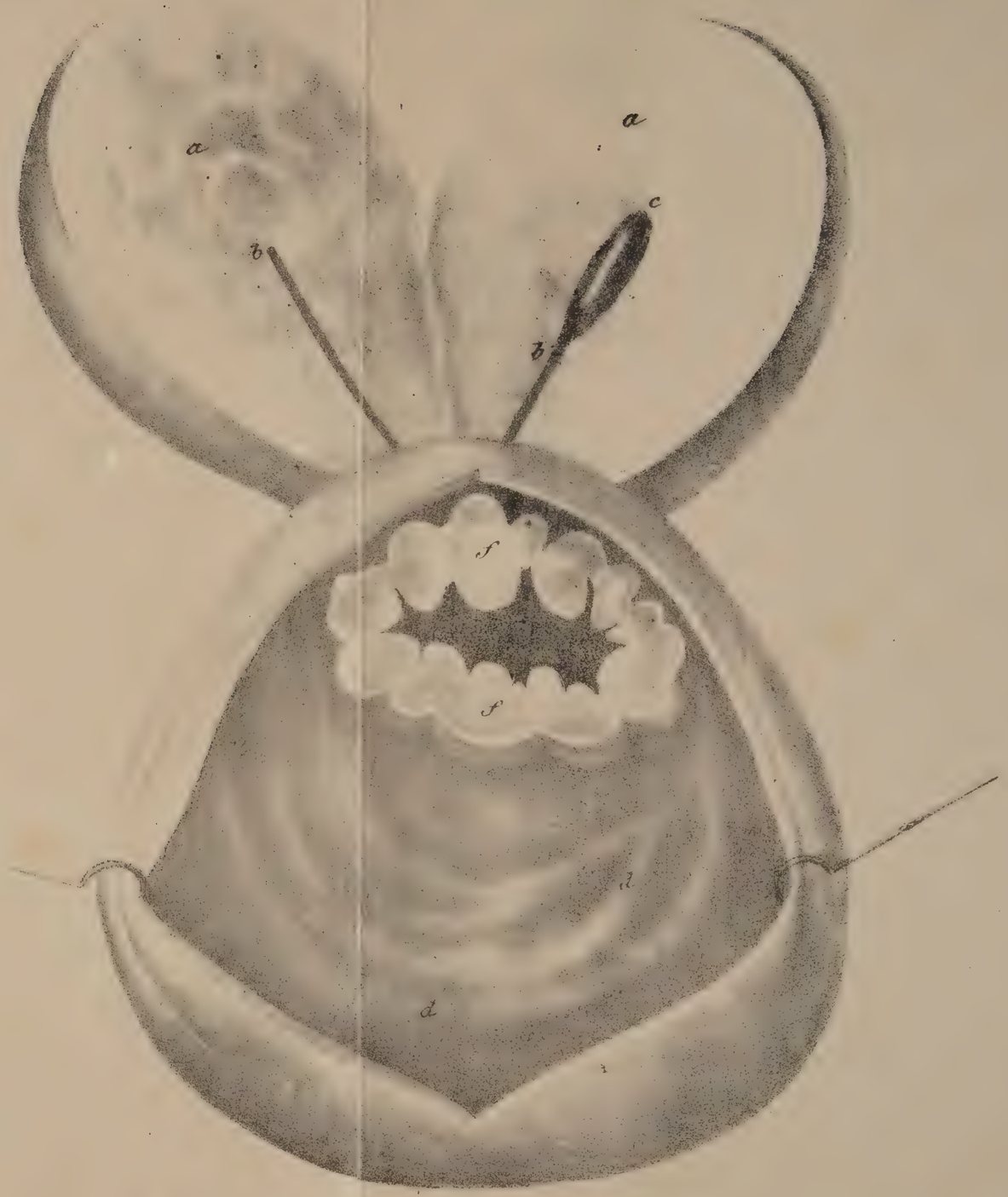


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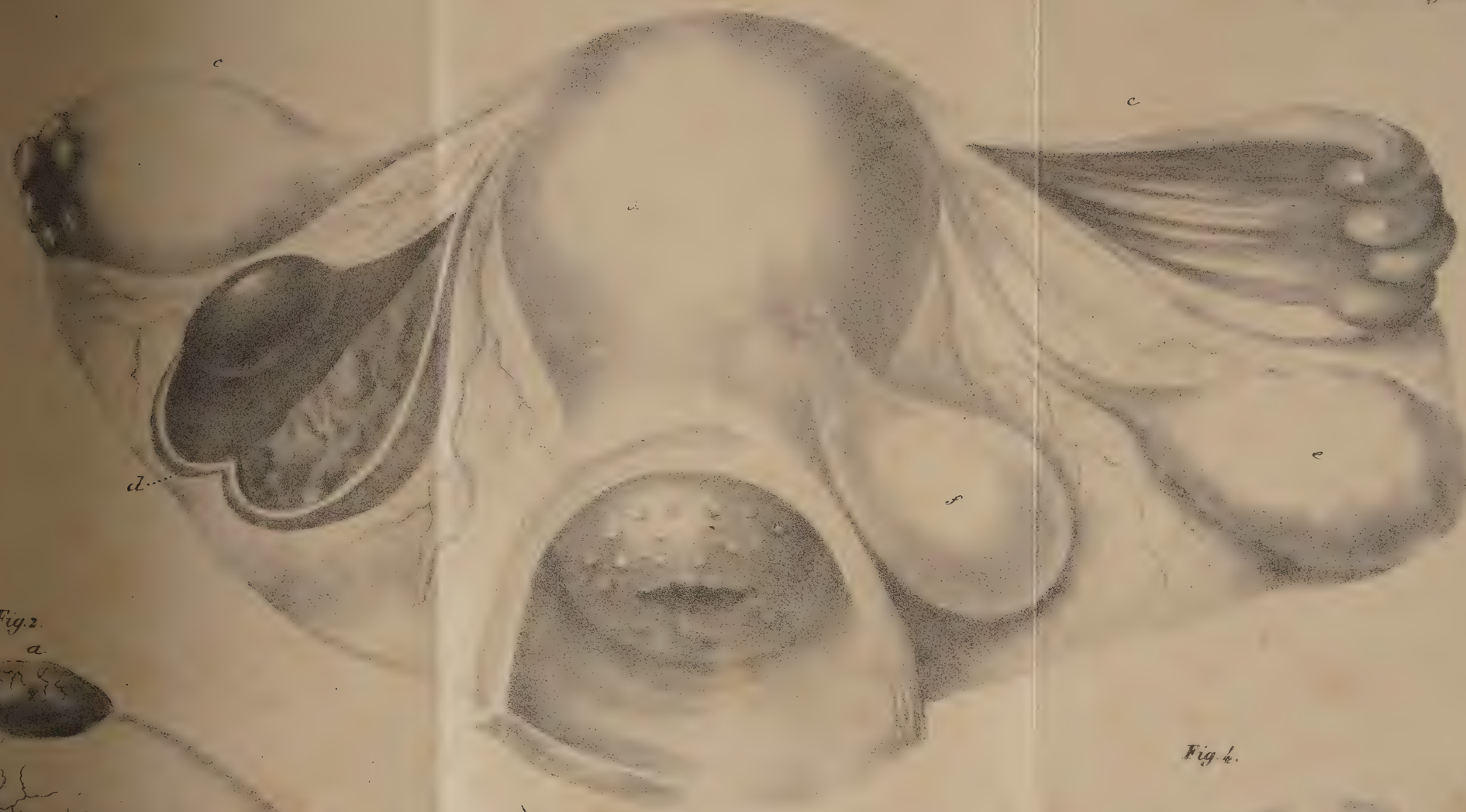

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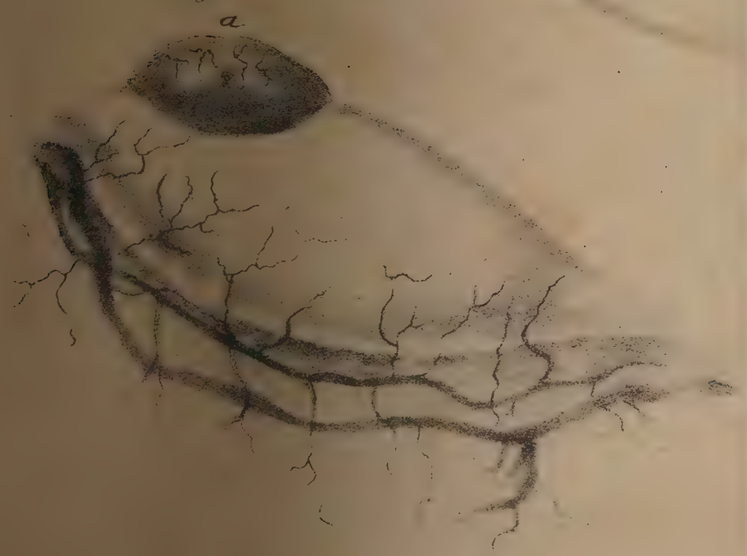

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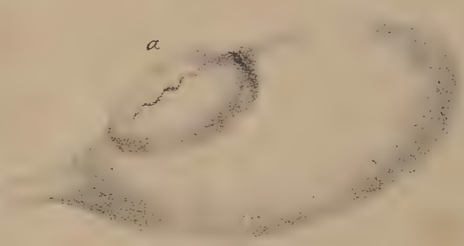


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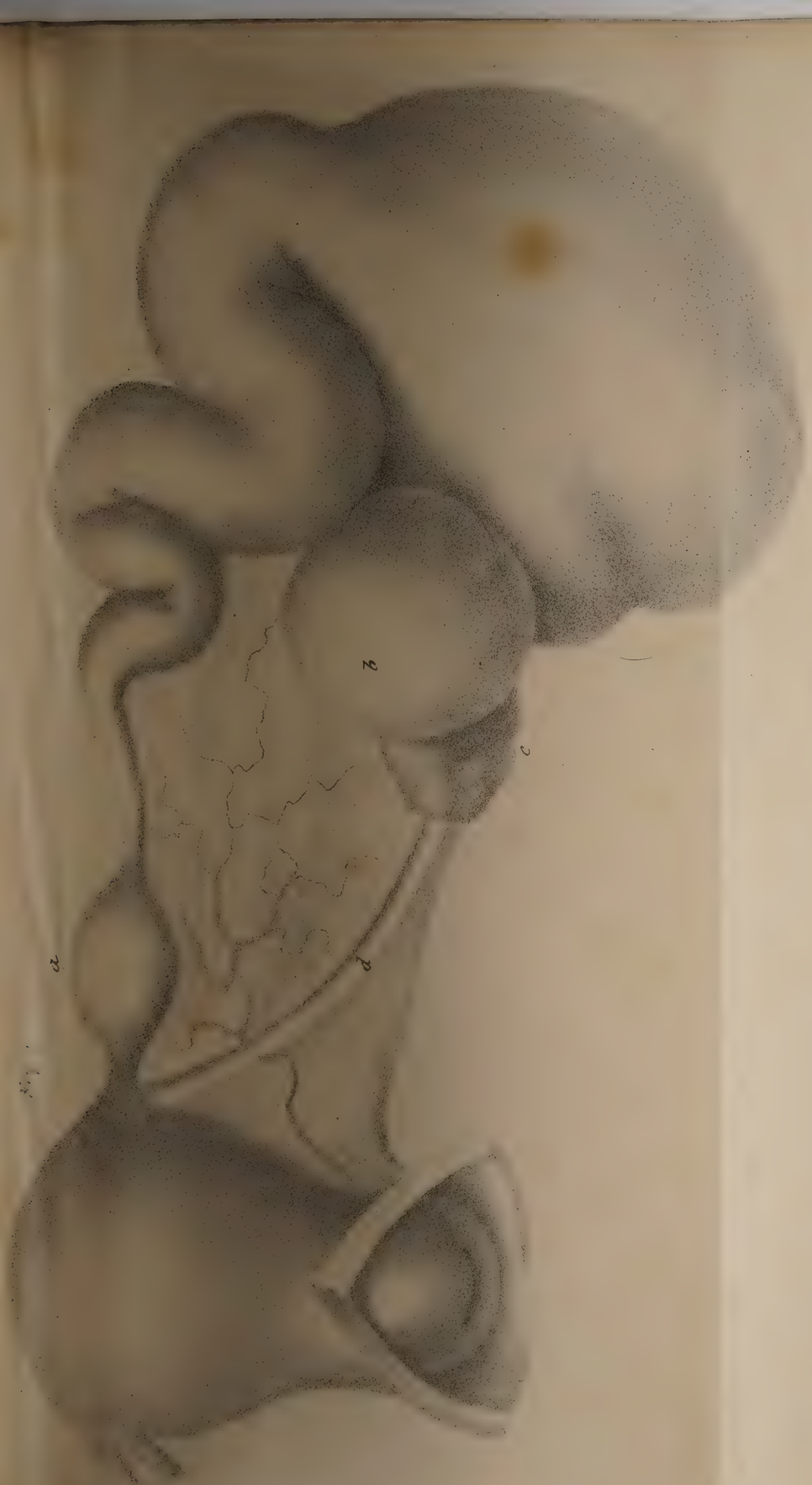


Fig. 2

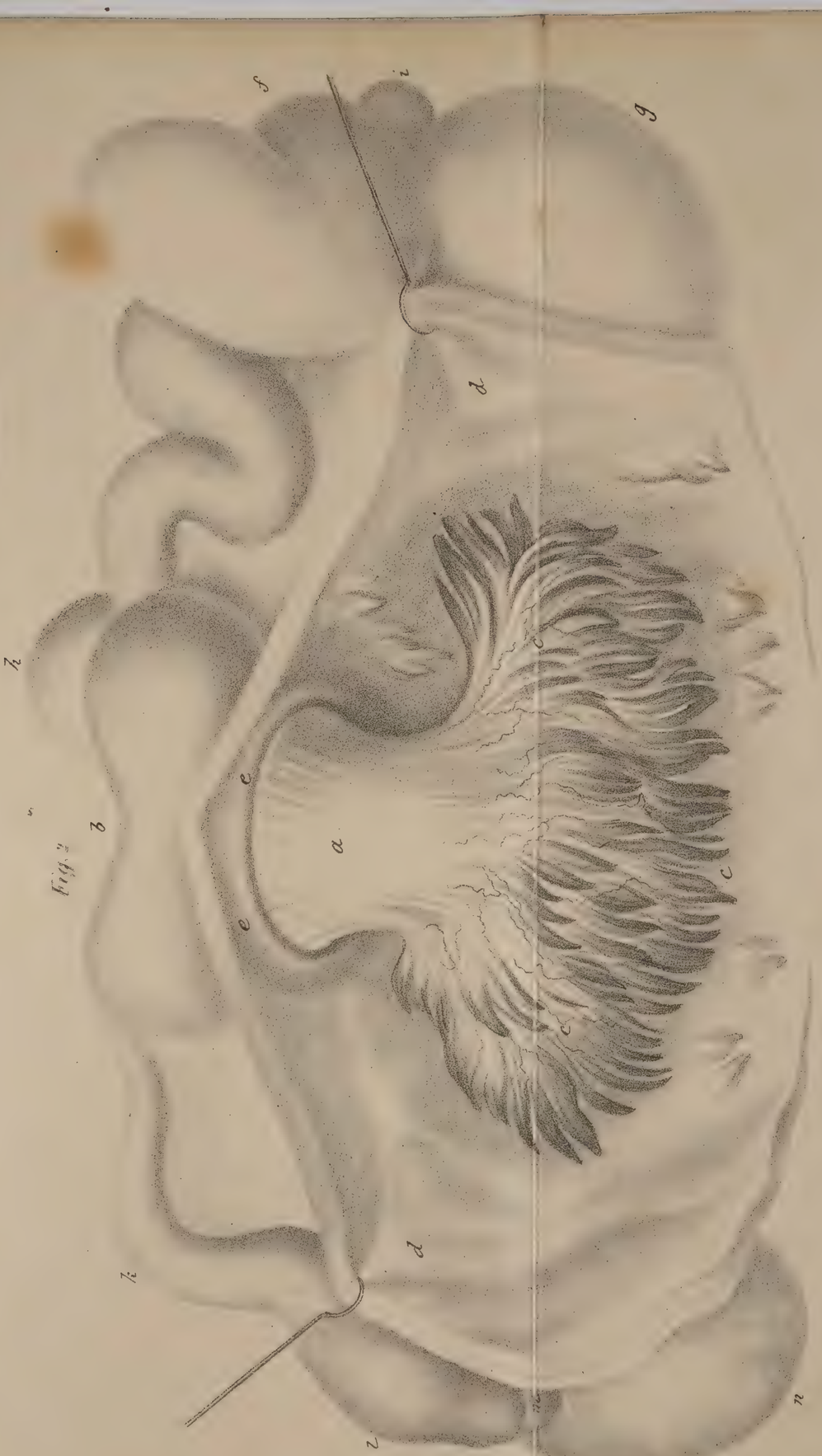


Fig. 3

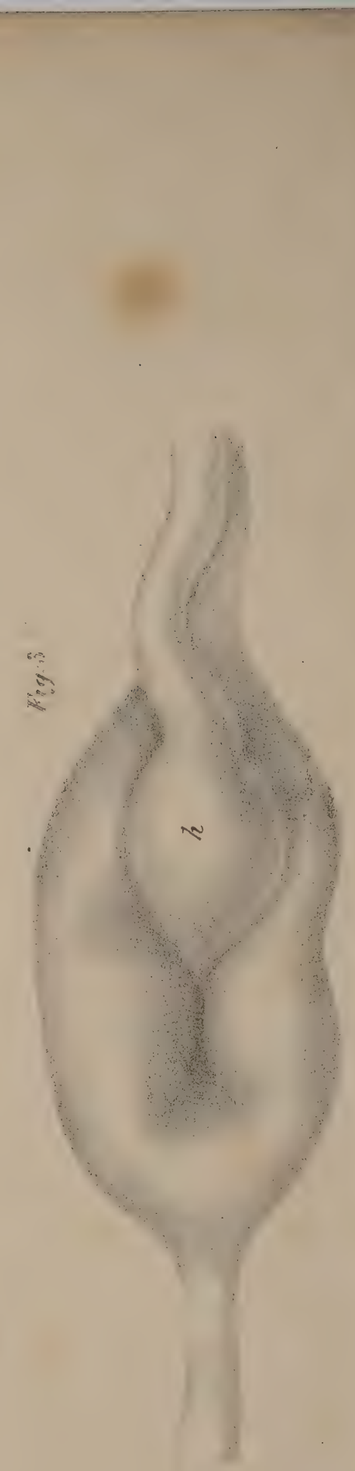


Fig. 1.

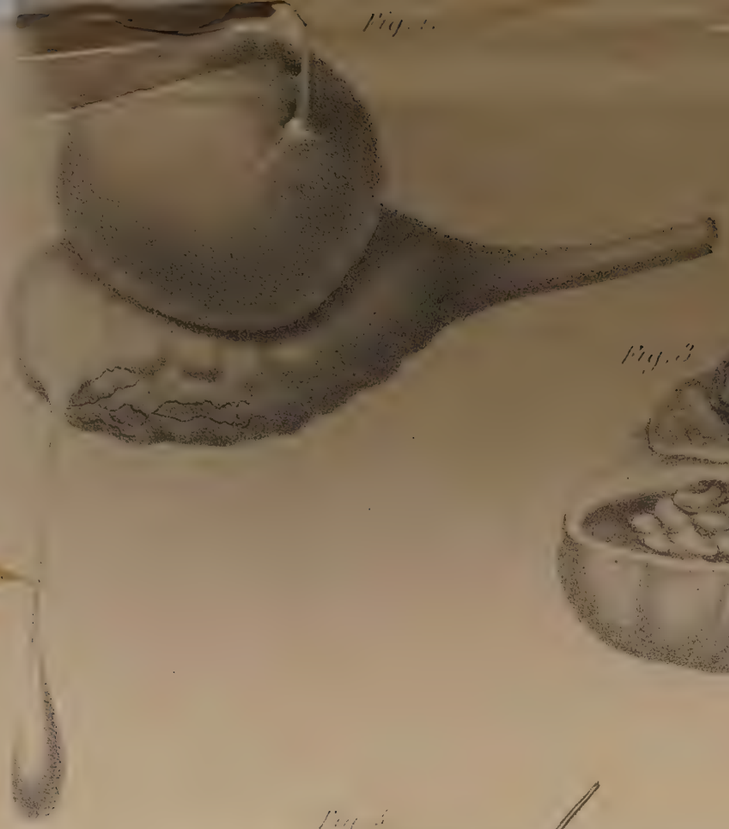


Fig. 2

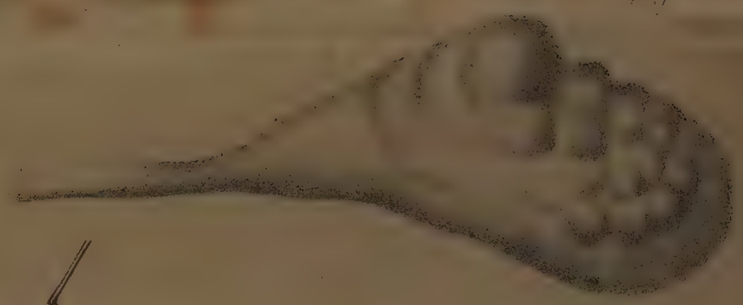


Fig. 3

Fig. 4

Fig. 5

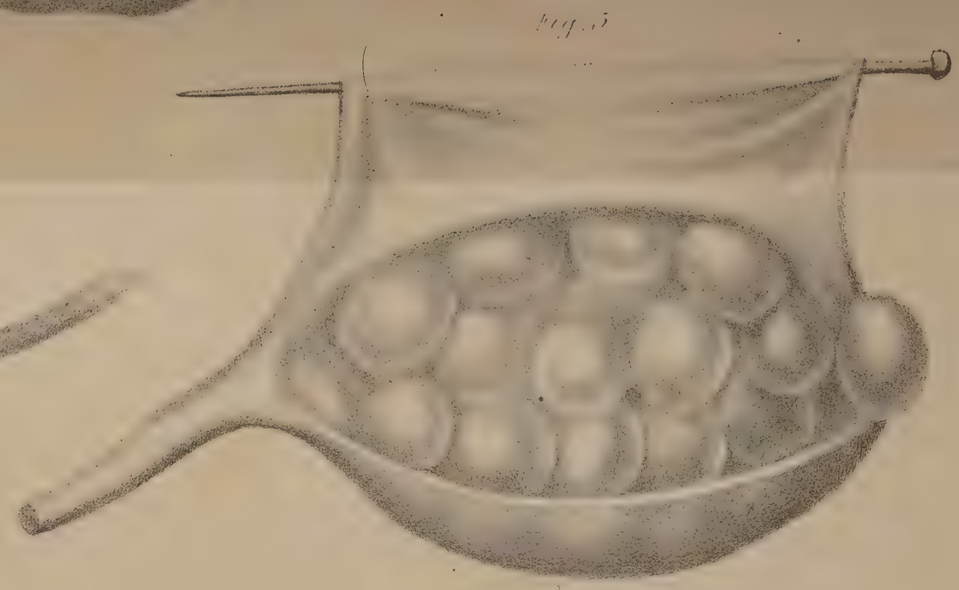


Fig. 6

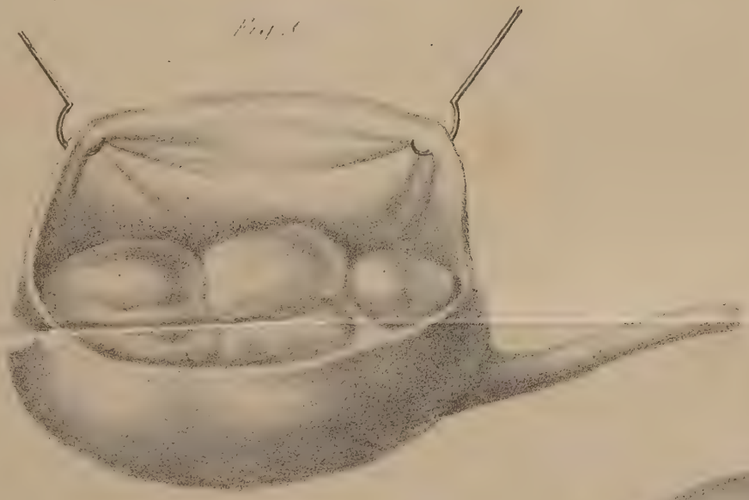


Fig. 7

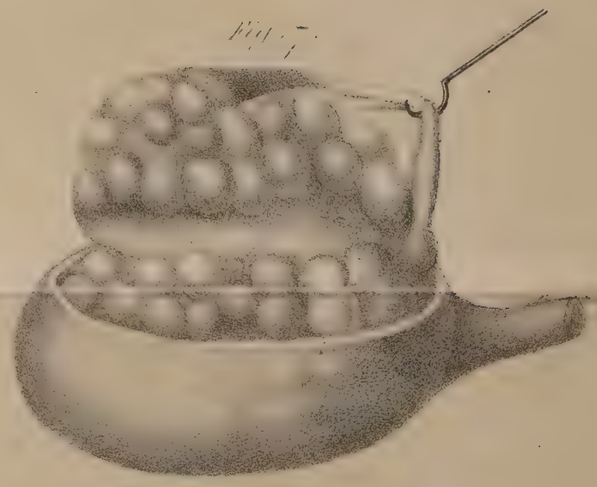
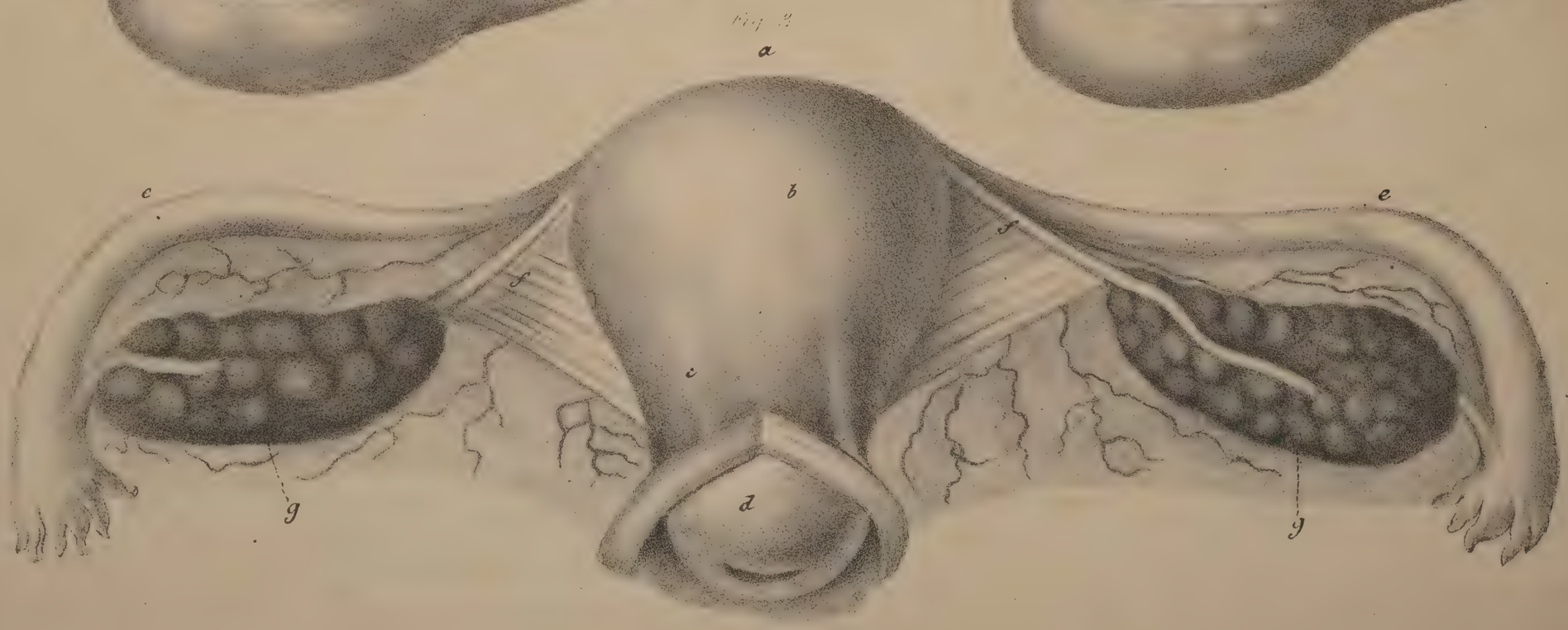
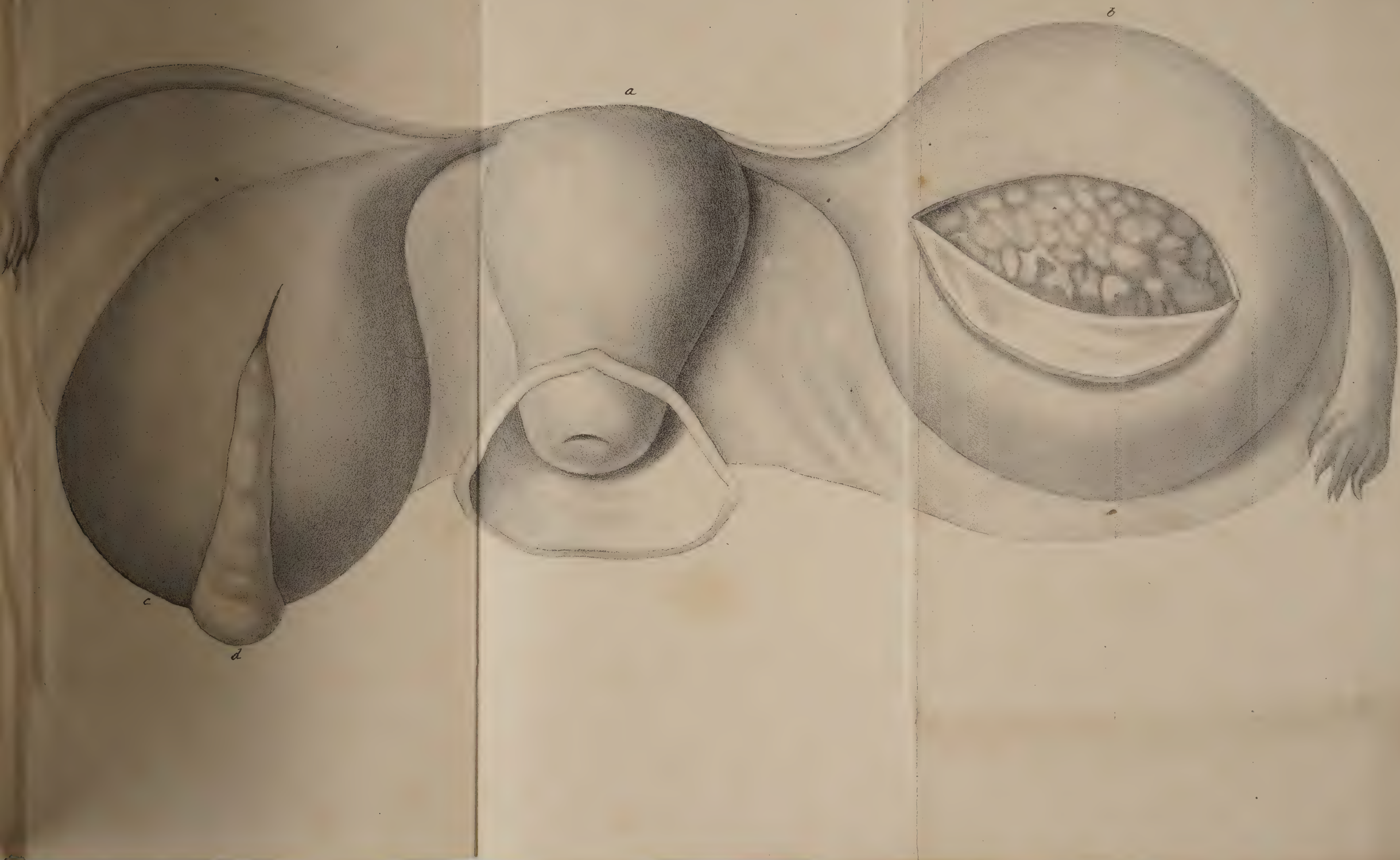


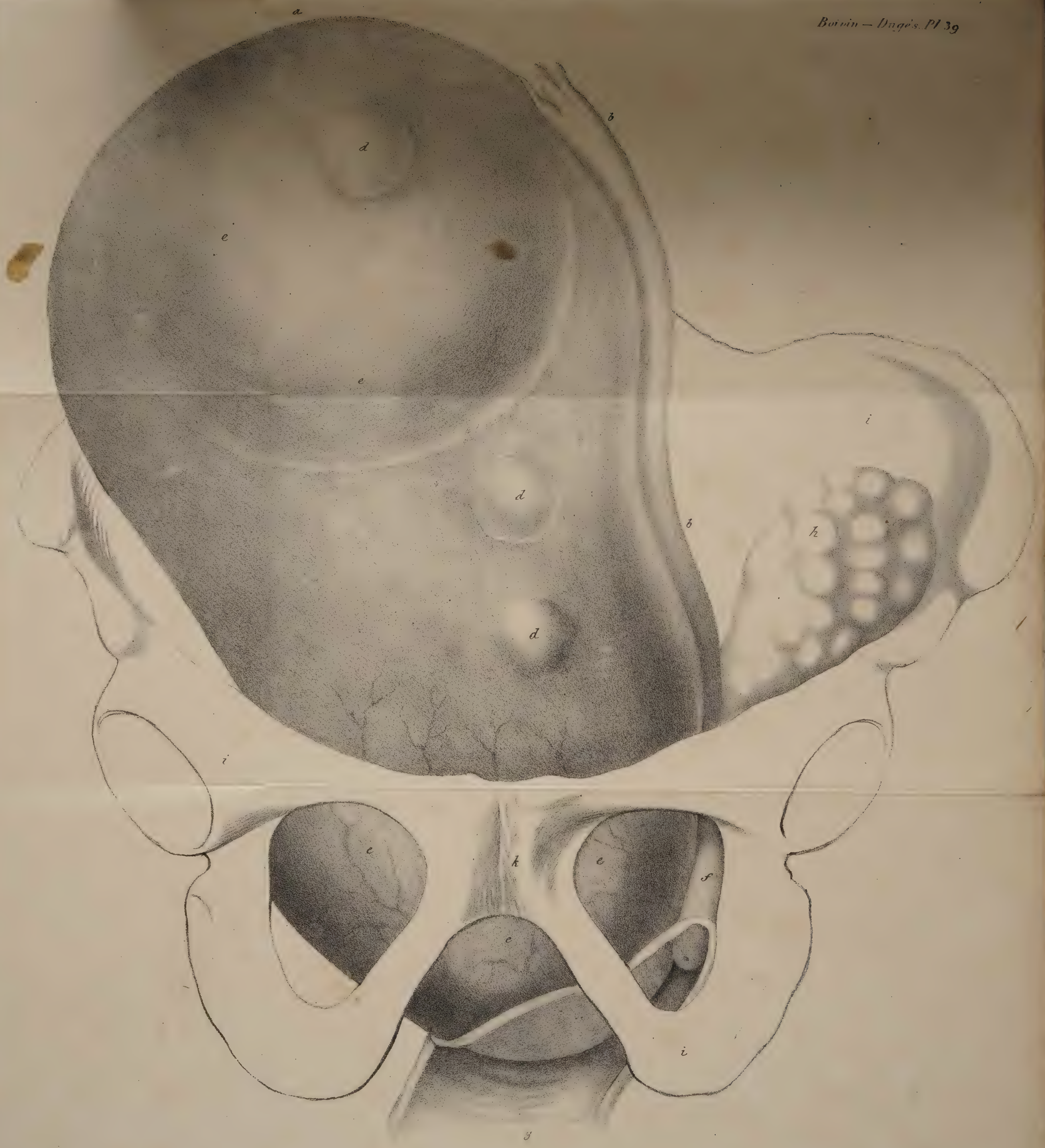
Fig. 8

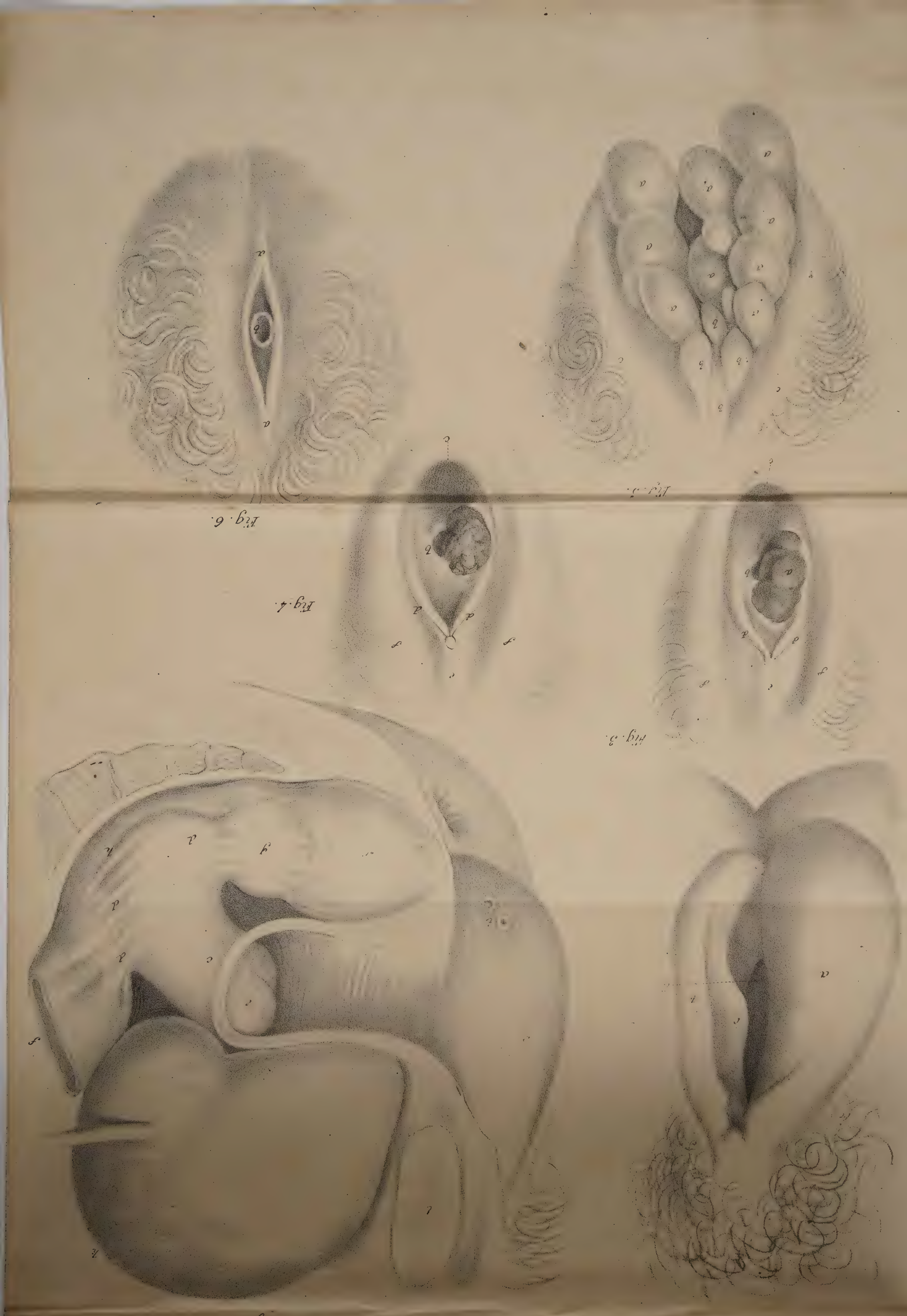


Boivin _ Dugés. Pl. 38.



Boivin — Dugès. Pl 39





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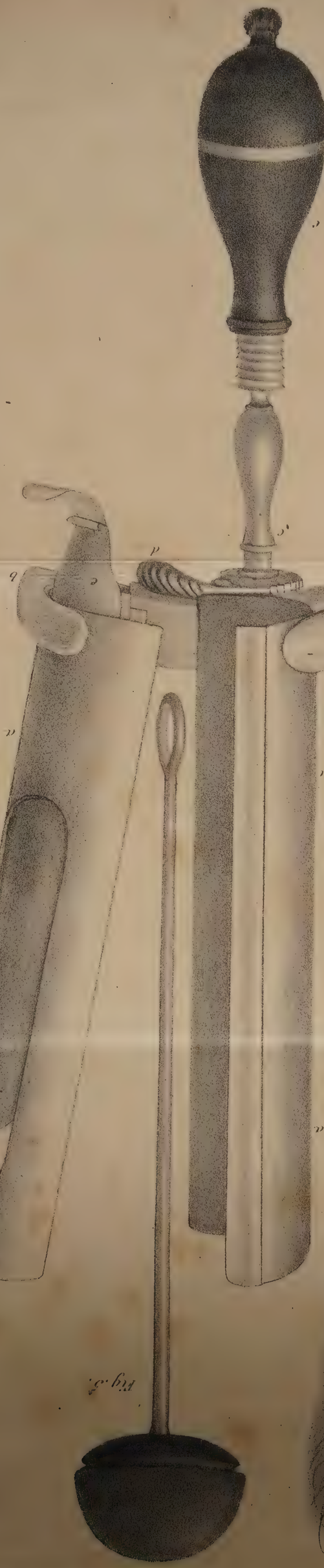

Fig. 3.

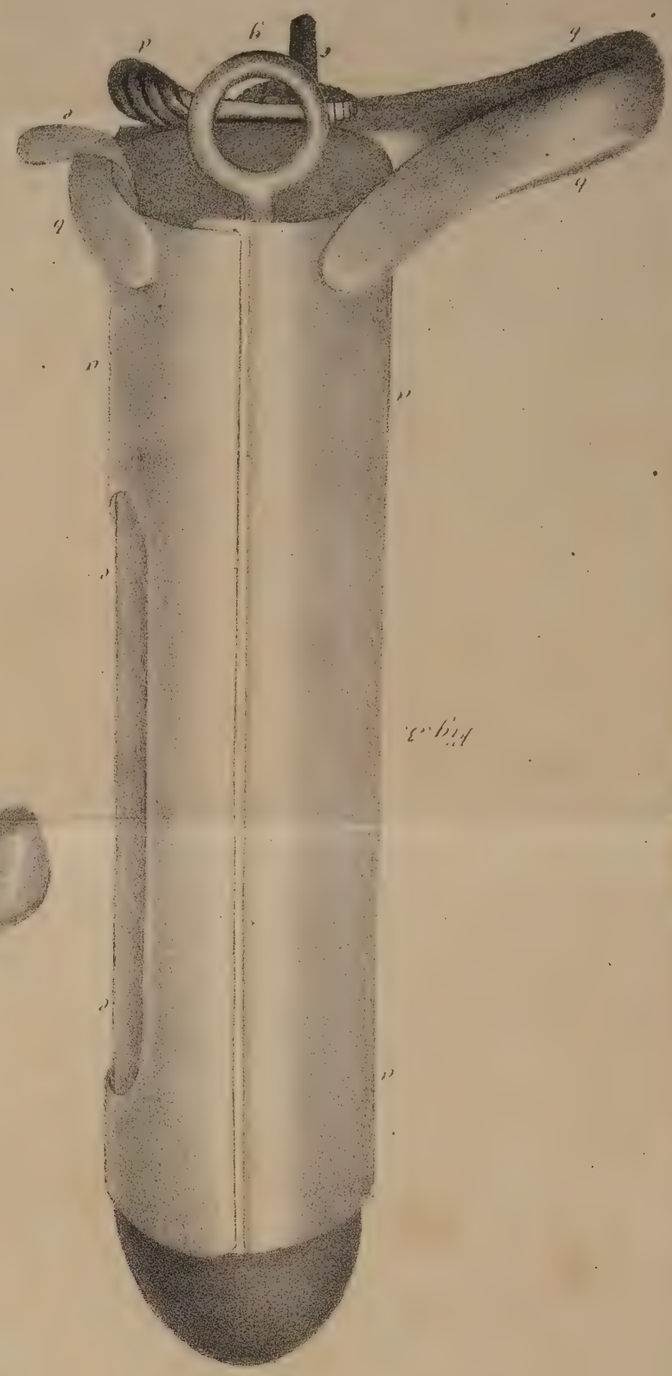

Fig. 4.

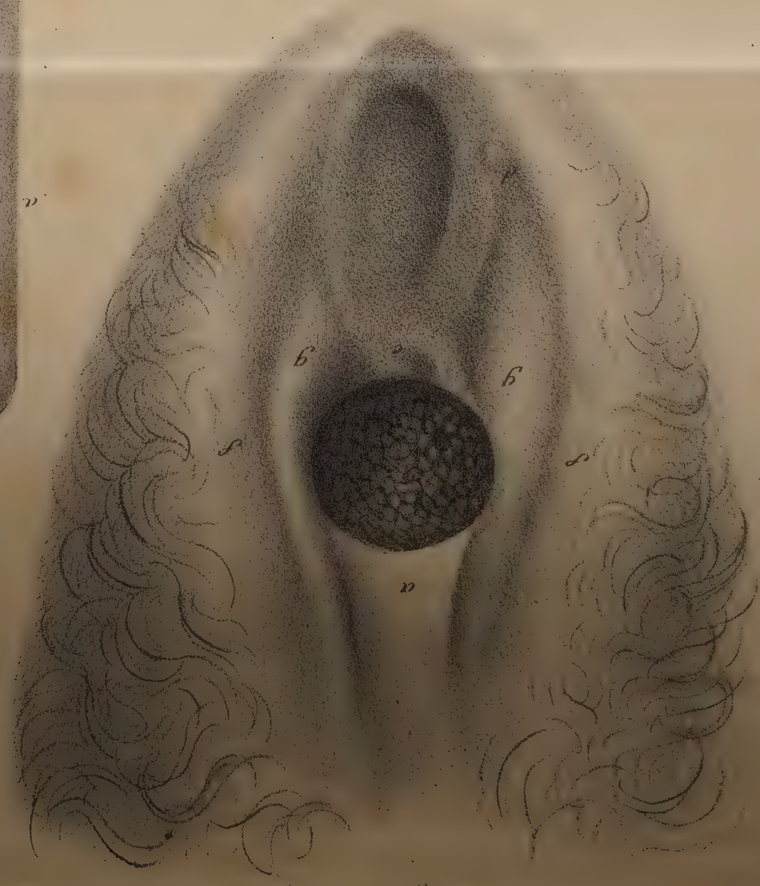

Fig. 1.